Visit saligae.com for more details
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<td>Digital &amp; Multimedia Sciences</td>
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<td>Engineering Sciences</td>
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<td>General</td>
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<td>Pathology/Biology</td>
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<td>Psychiatry &amp; Behavioral Science</td>
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<td>Questioned Documents</td>
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<td>Toxicology</td>
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<td>263</td>
</tr>
</tbody>
</table>
The pre-registration deadline is January 21, 2015. Forms must be received by this date to qualify for the pre-registration rate and to register for Special Functions. Registration forms received after January 21, 2015, will be processed as on-site registrations.

New This Year

- The 2015 Proceedings will be available electronically to all meeting attendees.

Three Ways to Register

- Scan & email your registration form (both pages) to tmccray@aafs.org.
- Mail your registration form, along with a check, money order, or purchase order to:
  AAFS
  410 North 21st Street
  Colorado Springs, CO 80904
  (Checks must be drawn on a U.S. bank in U.S. funds, made payable to AAFS.)
- Faxed registration forms are not accepted.

Registration Confirmation

- When you register online, you will receive an email confirmation immediately.
- When you email or mail your registration form to AAFS, a confirmation email will be sent once your registration form is processed.
- Bring a copy of your confirmation letter to the registration desk for meeting check-in.

Online Registration Information

- Online registrants are required to have an AAFS Web Account to register for the meeting.
- If you are currently a member or applicant of the AAFS, you will need to login to your AAFS Web Account to start your registration.
- If you are not a member of the AAFS, but you are or have been an Author or Co-Author on a presentation (oral or poster) at an AAFS Annual Meeting or a or previous Meeting Attendee, you will have an AAFS Web Account. Use the “Forgot User Name or Password” button found on the AAFS Web Login page to retrieve a forgotten password.
- If this is your first contact with the AAFS, you will need to create a new AAFS Web Account. Click the “Create an Account” button on the Login Page.

Questions

If you have any questions or need assistance with registration, contact the AAFS Office at (719) 636-1100 or email Tracie McCray (tmccray@aafs.org).
REGISTRATION INFORMATION

PRE-REGISTRATION DEADLINE
The deadline for pre-registration is January 21, 2015. Registration forms must be received by this date. Pre-registration forms received at the AAFS office after January 21, 2015, will be processed as on-site registrations and will cancel all Special Function selections (e.g., Breakfast and Luncheon Seminars, Workshops, and Special Sessions). Don’t delay; register today via online, mail, or scan and email your pre-registration form as soon as possible to ensure your full participation and reduced registration fees.

REFUNDS
All requests for refunds must be made in writing via email (tmccray@aafs.org) or mail to the AAFS headquarters. Cancelled registration fees will be refunded as follows:

<table>
<thead>
<tr>
<th>Prior to December 1</th>
<th>December 1-31</th>
<th>January 1-31</th>
<th>February 1-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full refund less $25 charge</td>
<td>75% refund</td>
<td>60% refund</td>
<td>50% refund</td>
</tr>
</tbody>
</table>

No refunds after February 6, 2015.

MEETING SITE
The 2015 AAFS Annual Scientific Meeting will be held at the Hyatt Regency Orlando in Orlando, FL.

GUEST REGISTRATION
One non-forensic scientist guest registration is permitted with each full-paying registration. Guest registration includes a name badge only (no meeting bag) and is not eligible for Continuing Education credit, Workshop registration, or Certificates of Attendance; however, Breakfast Seminar and Luncheon Seminar tickets may be purchased by the pre-registration deadline.

PRE-REGISTRATION SAVINGS
The benefits of pre-registration cannot be emphasized enough! 30% savings for AAFS members!

This is the only chance to register for Special Functions (breakfasts, luncheons, workshops, and special sessions)!

Your pre-registration form must be received by Wednesday, January 21, 2015.
American Academy of Forensic Sciences • Pre-Registration Form
67th Annual Scientific Meeting • February 16 – 21, 2015 • Orlando, FL
Pre-Registration Deadline – January 21, 2015

Three Ways to Register:
- Register on-line at www.aafs.org
- Scan & email your registration form (both pages) to tmccray@aafs.org
- Mail your form with check, money order, or purchase order to:
  AAFS
  410 North 21st Street
  Colorado Springs, CO 80904

Registration forms must be received by Wednesday, January 21, to be eligible to register for the 2015 Special Functions and to qualify for the discounted registration rate. On January 22, 2015, the on-site rates become effective and registration for 2015 Special Functions will be voided.

Registration questions may be directed to Tracie McCray (tmccray@aafs.org or 719.636.1100).

Faxed registration forms are not accepted.

<table>
<thead>
<tr>
<th>REGISTRANT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salutation (Dr/Mr/Ms):</td>
</tr>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Last Name:</td>
</tr>
<tr>
<td>Highest Degree:</td>
</tr>
<tr>
<td>Mailing Address:</td>
</tr>
<tr>
<td>City:</td>
</tr>
<tr>
<td>State/Province:</td>
</tr>
<tr>
<td>ZIP/Postal Code:</td>
</tr>
<tr>
<td>Country:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BADGE INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Badge Name:</td>
</tr>
<tr>
<td>Badge Agency/School:</td>
</tr>
<tr>
<td>Badge City:</td>
</tr>
<tr>
<td>Badge State/Province:</td>
</tr>
<tr>
<td>Badge Country:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITIONAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
</tr>
<tr>
<td>Cell Phone:</td>
</tr>
<tr>
<td>Hotel:</td>
</tr>
<tr>
<td>First AAFS Meeting?</td>
</tr>
<tr>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>Vocational Status:</td>
</tr>
<tr>
<td>Professional ☐</td>
</tr>
<tr>
<td>Student ☐</td>
</tr>
<tr>
<td>Academic ☐</td>
</tr>
<tr>
<td>Decision Maker ☐</td>
</tr>
<tr>
<td>Purchasing Agent ☐</td>
</tr>
<tr>
<td>Other ☐</td>
</tr>
<tr>
<td>Would you like to receive pre-meeting exhibitor mailings?</td>
</tr>
<tr>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>Emergency Contact Name:</td>
</tr>
<tr>
<td>Emergency Contact Phone:</td>
</tr>
<tr>
<td>Gender:</td>
</tr>
<tr>
<td>Male ☐ Female ☐</td>
</tr>
</tbody>
</table>

Non-forensic scientist guest registration includes a name badge only and is not eligible for Continuing Education credit, Workshop/Special Session Registration, or Certificates of Attendance; however, Breakfast and Luncheon Seminar tickets may be purchased by the Pre-Registration deadline.

Attending Guest: ☐ Yes ☐ No  Guest Name: ________________________________________________________________

<table>
<thead>
<tr>
<th>ADA ACCOMMODATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please list any special dietary needs:</td>
</tr>
<tr>
<td>Please list ADA accommodation requests:</td>
</tr>
</tbody>
</table>

Please note: This ADA Accommodations request refers to meeting session accommodations (e.g., wheelchair access, assisted listening devices, etc.) ADA accommodations related to hotel room reservations should be directed to the hotel when making reservations. ADA Accommodations are required by the Pre-Registration deadline (January 21, 2015). Requests received after this date may not be processed or fulfilled in time.

<table>
<thead>
<tr>
<th>CONTINUING EDUCATION CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ $100 Administrative Fee</td>
</tr>
<tr>
<td>Registrants must pick up a CE Credit Request Form at the registration counter and submit by the deadline to credit certificate. AAFS is an accredited provider by the Accreditation Council for Continuing Medical Education (ACCME), Academy of General Dentistry (AGD), and American Association of Clinical Chemistry (AACC). In addition, credits for continuing legal education and general continuing education are offered.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REGISTRATION FEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes admittance into AAFS sessions starting with the Tuesday evening Academy Bash through the Saturday morning Scientific Sessions (excludes all Special Functions). A complimentary beverage ticket is included with all registrations except Student, Daily, and Workshop Only.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-Registration (through January 21)</th>
<th>On-Site Registration (effective January 22)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ AAFS Members, Trainee Affiliates, Applicants*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>☐ AAFS Student Affiliates</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>☐ AAFS Retired Fellows</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>☐ Non-Members</td>
<td>$450</td>
<td>$520</td>
</tr>
<tr>
<td>☐ Non-Member Trainees*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>☐ Non-Member Full-Time Students*</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>☐ IAI Members*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>☐ AFTE Members*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Daily: ☐ Wed ☐ Thurs ☐ Fri ☐ Sat</td>
<td>$145/DAY</td>
<td>$160/DAY</td>
</tr>
<tr>
<td>☐ Workshop Only</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Must provide/submit additional documentation by the January 21, 2015, Pre-Registration deadline (see below):
- ♦ Applicants – Completed AAFS membership application on file with Academy Office.
- ♦ Non-Member Full-Time Students – Proof of full-time status.
- ♦ Non-Member Trainees – Letter from employer verifying trainee status.
- ♦ IAI & AFTE Members – Proof of current membership.

Refund Policy: All requests for refunds must be submitted via mail or email (tmccray@aafs.org). Phone and faxed requests are not accepted. Cancelled registration fees will be refunded accordingly: Dec 1-31 at 75%; Jan 1-31 at 60%; Feb 1-6 at 50%; no refunds after February 6.
### SPECIAL FUNCTIONS

The following sessions are priced separately and are not included in the Registration Fees. Special Functions fill quickly due to limited seating.

Registration for all Special Functions officially closes as of the **January 21, 2015**, Pre-Registration deadline. **AAFS has a firm policy that non-registered attendance or auditing is not permitted in these sessions.** *(AAFS Policy and Procedure Manual 3.1.3.3.)*

<table>
<thead>
<tr>
<th>Breakfast Seminars</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 7:00-8:30</td>
<td>B1</td>
<td>Wildland Fires of Electrical Origin – Deaths and Litigation</td>
<td>$50</td>
</tr>
<tr>
<td>Tues 7:00-8:30</td>
<td>B2</td>
<td>Mental Health Support to Law Enforcement: Practical Issues</td>
<td>$50</td>
</tr>
<tr>
<td>Tues 7:00-8:30</td>
<td>B3</td>
<td>Bank Robbery on Chicago’s South Side, 75 Years After John Dillinger</td>
<td>$50</td>
</tr>
<tr>
<td>Wed 7:00-8:30</td>
<td>B4</td>
<td>Crime Scene Reconstruction of Nine United States Air Force Active Duty Members Killed in Kabul, Afghanistan</td>
<td>$50</td>
</tr>
<tr>
<td>Thurs 7:00-8:30</td>
<td>B5</td>
<td>The Roso Case: An Unpublished Trial Regarding Hermaphroditism Verified Through the Expertise and Written Advice of Leading Physicians in 19th-Century Florence</td>
<td>$50</td>
</tr>
<tr>
<td>Thurs 7:00-8:30</td>
<td>B6</td>
<td>Recent Changes in Pharmaceutical Industry Operations: Boon or Bane?</td>
<td>$50</td>
</tr>
<tr>
<td>Fri 7:00-8:30</td>
<td>B7</td>
<td>The Businessman, the Wife, the Aunt, and the Children: Multiple Murders by Drowning</td>
<td>$50</td>
</tr>
<tr>
<td>Fri 7:00-8:30</td>
<td>B8</td>
<td>Tom Krauss Bicentennial Breakfast: From Frye to Daubert – A Change in Legal Standard</td>
<td>$50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Luncheon Seminars</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurs 12:00-1:30</td>
<td>L1</td>
<td>Fetal Kidnapping by Cesarean Section</td>
<td>$55</td>
</tr>
<tr>
<td>Fri 12:00-1:30</td>
<td>L2</td>
<td>The Dating Game Killer: Rodney Alcala’s 40-Year Dance With Death</td>
<td>$55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section Luncheons (Section Business Meetings begin following the Luncheon – see <strong>Advance Program</strong> for times)</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed L3</td>
<td>Digital &amp; Multimedia Sciences Section Business Luncheon</td>
<td>$55</td>
<td>$</td>
</tr>
<tr>
<td>Wed L4</td>
<td>General Section Business Luncheon</td>
<td>$55</td>
<td>$</td>
</tr>
<tr>
<td>Wed L5</td>
<td>Jurisprudence Section Business Luncheon</td>
<td>$55</td>
<td>$</td>
</tr>
<tr>
<td>Wed L6</td>
<td>Pathology/Biology Section Business Luncheon</td>
<td>$55</td>
<td>$</td>
</tr>
<tr>
<td>Wed L7</td>
<td>Psychiatry &amp; Behavioral Science Section Business Luncheon (sections only)</td>
<td>$10</td>
<td>$</td>
</tr>
<tr>
<td>Wed L8</td>
<td>Toxicology Section Business Luncheon</td>
<td>$55</td>
<td>$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special Sessions</th>
<th>Fee</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tues 8:30-12:15</td>
<td>S1</td>
<td>Interdisciplinary Symposium – Past Presidents – Future Science: Hot Leads in Contemporary Forensic Research</td>
</tr>
<tr>
<td>Tues 8:30-5:00</td>
<td>S2</td>
<td>Young Forensic Scientists Forum – YFSF 20th Anniversary: The Past, the Present, and Our Future</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workshops</th>
<th>With/Meeting</th>
<th>Workshop</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 8:30-12:00</td>
<td>W1</td>
<td>Mass Fatality Incidents: An Integrated Approach</td>
<td>$100</td>
</tr>
<tr>
<td>Mon 8:30-12:00</td>
<td>W2</td>
<td>The Electrophysiology of Impulsive Aggression and Criminal Responsibility</td>
<td>$100</td>
</tr>
<tr>
<td>Mon 8:30-4:30</td>
<td>W3</td>
<td>Classification of Typewritten Documents</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-4:45</td>
<td>W4</td>
<td>Obtaining Successful DNA Profiles From Challenging Samples</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-5:00</td>
<td>W5</td>
<td>Ancestry Estimation in the 21st Century</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-5:00</td>
<td>W6</td>
<td>Practical Homicide Investigation*: Offender-Manipulated Homicide Scenes Relating to Equivocal Death and Staged Crime Scenes</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-5:30</td>
<td>W7</td>
<td>Challenges in Fire Debris Analysis</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-5:30</td>
<td>W8</td>
<td>From Fire Dynamics to Legal Dynamics: Shifted Science and the Criminal Justice System’s Response</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-5:30</td>
<td>W9</td>
<td>Forensic Anthropology and Cold Case Investigations: Breaking the Ice</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 8:30-5:30</td>
<td>W10</td>
<td>NamUs: The Results of Forensic Collaboration</td>
<td>$200</td>
</tr>
<tr>
<td>Mon 1:00-5:00</td>
<td>W11</td>
<td>RADid: Using Radiologic Technologies to Identify Unknown Decedents</td>
<td>$125</td>
</tr>
<tr>
<td>Mon 1:00-5:00</td>
<td>W12</td>
<td>Implementing and Evaluating 3D Technology in a 2D World</td>
<td>$125</td>
</tr>
<tr>
<td>Mon 1:00-5:00</td>
<td>W13</td>
<td>The Examination of Skillfully Simulated Signatures</td>
<td>$100</td>
</tr>
<tr>
<td>Mon 1:00-5:30</td>
<td>W14</td>
<td>On the Leading Edge of Forensic Science</td>
<td>$100</td>
</tr>
<tr>
<td>Tues 8:30-12:00</td>
<td>W15</td>
<td>Clinical Toxicology of the Poisoned Patient</td>
<td>$125</td>
</tr>
<tr>
<td>Tues 8:30-1:00</td>
<td>W16</td>
<td>Your Attention, Please! – A Public-Speaking Skills Workshop</td>
<td>$125</td>
</tr>
<tr>
<td>Tues 8:30-5:00</td>
<td>W17</td>
<td>Quality Assurance in Human Identification</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 8:30-5:00</td>
<td>W18</td>
<td>Sadism: Distinguishing Between Criminal Behavior and Offender Analysis</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 8:30-5:00</td>
<td>W19</td>
<td>Automating Image Production for Forensic Document Examiners</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 8:30-5:00</td>
<td>W20</td>
<td>Cognitive Bias Issues in the Forensic Analysis of Pattern and Impression Evidence and in Medicolegal Evaluations</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 8:30-5:00</td>
<td>W21</td>
<td>Death in a Bathtub: The Trial of Drew Peterson</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 8:30-5:30</td>
<td>W22</td>
<td>Looking Toward a Greater Awareness of Youth Street Gangs</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 9:00-5:00</td>
<td>W23</td>
<td>Hands-On Evaluation of the Thanatomicrobiome and Epinecrotic Communities</td>
<td>$200</td>
</tr>
<tr>
<td>Tues 1:00-5:00</td>
<td>W24</td>
<td>Scientific Neutrality in Expert Witness Testimony</td>
<td>$125</td>
</tr>
</tbody>
</table>

### PAYMENT PROCESSING

**Registrant Name:**

Continuing Education Fee *(From Page 1):*  
Registration Fee *(From Page 1):*  
Special Functions Total *(From Above):*  
**Total Amount Due:** *

All payments to AAFS must be in US Funds drawn on a US bank.

**Email Receipt Copy to:** _______________________________

**AAFS FEIN:** 87-0287045

**Signature Required for Credit Card Purchases**

Cardholder authorizes this payment and agrees to comply with the obligations set forth in the Cardholder Agreement with the card issuer.
ABOUT THE AAFS

For sixty-seven years, the American Academy of Forensic Sciences (AAFS) has served a distinguished and diverse membership. Its 6,631 members are divided into eleven sections spanning the forensic enterprise. Included among the Academy’s members are physicians, attorneys, dentists, toxicologists, anthropologists, document examiners, digital evidence experts, psychiatrists, engineers, physicists, chemists, criminalists, educators, and others. Representing all 50 United States, Canada, and 68 other countries worldwide, they actively practice forensic science and, in many cases, teach and conduct research in the field as well. Each section provides opportunities for professional development, personal contacts, awards, and recognition. Many sections publish periodic newsletters and mailings which keep their members abreast of activities and developments in their fields.

As a professional society dedicated to the application of science to the law, the AAFS is committed to the promotion of education and the elevation of accuracy, precision, and specificity in the forensic sciences. It does so via the Journal of Forensic Sciences (its internationally recognized scientific journal), newsletters, its annual scientific meeting, the conduct of seminars and meetings, and the initiation of actions and reactions to various issues of concern. For its members and affiliates, AAFS provides placement services as well as scientific reference studies. As the world’s most prestigious forensic science organization, the AAFS represents its membership to the public and serves as the focal point for public information concerning the forensic science profession. Founded in 1948, the AAFS is headquartered in Colorado Springs, CO.

AAFS Annual Scientific Meeting

Each February, the AAFS scientific meeting gathers together approximately 5,000 world-renowned professionals to present the most current information, research, and updates in their fields. More than 900 scientific papers, seminars, workshops, and other special sessions are presented. In addition, approximately 180 exhibitors will be present to showcase the cutting-edge technology and services of this ever-changing profession.

Future Annual Meetings

2016 AAFS Annual Meeting
Las Vegas, NV
February 22-27

2017 AAFS Annual Meeting
New Orleans, LA
February 13-18

2018 AAFS Annual Meeting
Seattle, WA
February 19-24

2019 AAFS Annual Meeting
Baltimore, MD
February 18-23

2020 AAFS Annual Meeting
Anaheim, CA
February 17-22

410 North 21st Street
Colorado Springs, CO 80904
Phone: (719) 636-1100
Fax: (719) 636-1993
Email: membership@aafs.org
Website: www.aafs.org

Anne Warren, Executive Director
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Treasurer: Betty Layne DesPortes, JD, MS

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Jurisprudence: Roderick T. Kennedy, JD
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Pathology/Biology: Gregory G. Davis, MD
Psychiatry & Behavioral Science: John L. Young, MD
Questioned Documents: Jane A. Lewis, MFS
Toxicology: Ruth E. Winecker, PhD

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Breakfast Seminars: Karen B. Rosenbaum, MD; Claire E. Shepard, MS
Luncheon Seminars: Laura L. Liptai, PhD; Adam J. Freeman, DDS
Last Word Society: James E. Starrs, LLM; Kenneth E. Melson, JD
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Student Academy: Julie A. Howe, MBA; Marilyn T. Miller, EdD
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Questioned Documents: F.L. Jim Lee, Jr., MS
Toxicology: Rebecca A. Jufer Phipps, PhD; Dan T. Anderson, MS
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* R.B.H. Gradwohl, MD ............................................... 1949-51
* S.A. Levinson, MD, PhD ........................................... 1951-52
* R.N. Harger, PhD .................................................. 1952-53

* Louis P. Regan, MD, LLB ........................................... 1953-54
* A.W. Freireich, MD ................................................ 1954-55
* Fred E. Inbau, BS, LLB, LLM ...................................... 1955-56
* Alan R. Moritz, MD .................................................. 1956-57
* Val B. Satterfield, MD .............................................. 1957-58

* John F. Williams, BS ............................................... 1958-59
* Ordway Hilton, MA ................................................... 1959-60

* Russel S. Fisher, MD ............................................... 1960-61
* S.R. Gerber, MD, LLB .............................................. 1961-62

* Milton Helpem, MD .................................................. 1962-63
* Oliver C. Schroeder, Jr., JD ....................................... 1963-64
* Dwight M. Palmer, MD .............................................. 1964-65
* Robert B. Forney, PhD .............................................. 1965-66

* Jack L. Sachs, JD ..................................................... 1966-67
* Charles S. Petty, MD ............................................... 1967-68

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* James W. Osterburg, MPA ......................................... 1969-70

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Cyril H. Wecht, MD, JD .............................................. 1971-72

Douglas M. Lucas, MSc, DSc ....................................... 1972-73

* Morton F. Mason, PhD .............................................. 1973-74
David A. Crown, DCrime ............................................ 1974-75

* Robert J. Joling, JD .................................................. 1975-76
* James T. Weston, MD ............................................... 1976-77

* B. Edward Whittaker, BS ......................................... 1977-78
Kurt M. Dubowski, PhD .............................................. 1978-79

* June K. Jones, MS ................................................... 1979-80
Lowell J. Levine, DDS ................................................ 1980-81

* Joseph H. Davis, MD ............................................... 1981-82

*Anthony Longhetti, BA ............................................. 1982-83
*George E. Gantner, MD ............................................. 1983-84
Maureen Casey Owens, AB ........................................ 1984-85

*Arthur D. Goldman, DMD .......................................... 1985-86
*Don Harper Mills, JD, MD .......................................... 1986-87

Yale H. Caplan, PhD .................................................. 1987-88
Richard S. Frank, BS ................................................ 1988-89

*Richard C. Froede, MD .............................................. 1989-90

*Ellis R. Kerley, PhD ................................................. 1990-91

*Homer R. Campbell, Jr., DDS ..................................... 1991-92

Marina Stajić, PhD .................................................... 1992-93

*Enrico N. Togneri, BA .............................................. 1993-94

Steven C. Batterman, PhD .......................................... 1994-95
Haskell M. Pitluck, JD ............................................... 1995-96

Richard Rosner, MD .................................................. 1996-97
Michael A. Peat, PhD ................................................ 1997-98

Barry A.J. Fisher, MS, MBA ......................................... 1998-99
Patricia J. McFeeley, MD ............................................. 1999-00

John D. McDowell, DDS, MS ........................................ 2000-01
Mary Fran Ernst, BLS ................................................. 2001-02

Graham R. Jones, PhD ................................................. 2002-03
Kenneth E. Melson, JD ............................................... 2003-04

Ronald L. Singer, MS .................................................. 2004-05
Edmund R. Donoghue, MD .......................................... 2005-06

James G. Young, MD .................................................. 2006-07
Bruce A. Goldberger, PhD ........................................... 2007-08
Carol E. Henderson, JD .............................................. 2008-09

Joseph P. Bono, MA .................................................. 2009-10

Douglas H. Ubelaker, PhD .......................................... 2011-12

Barry K. Logan, PhD .................................................. 2013-14

* Deceased
### Section Officers

**Anthropology**  
**Chair:** Phoebe R. Stubblefield, PhD  
**Secretary:** Angi M. Christensen, PhD

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**Chair:** Lawrence Quarino, PhD  
**Secretary:** John J. Lentini, BA

**Digital & Multimedia Sciences**  
**Chair:** Rhesa G. Gilliland, MS  
**Secretary:** Marcus Rogers, PhD

**Engineering Sciences**  
**Chair:** Carol A. Erikson, MSPH  
**Secretary:** John Nixon, MBA

**General**  
**Chair:** Alan F. Boehm, MFS  
**Secretary:** Claire E. Shepard, MS

**Jurisprudence**  
**Chair:** Christine Funk, JD  
**Secretary:** Stephanie Domitrovich, JD, PhD

---

### R.B.H. Gradwohl Laureates

<table>
<thead>
<tr>
<th>Laureate</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milton Helpem, MD</td>
<td>1978</td>
</tr>
<tr>
<td>Rolla N. Harger, PhD</td>
<td>1979</td>
</tr>
<tr>
<td>James T. Weston, MD</td>
<td>1984</td>
</tr>
<tr>
<td>Oliver C. Schroeder, Jr., MD</td>
<td>1987</td>
</tr>
<tr>
<td>Abel M. Dominguez, PhD</td>
<td>1993</td>
</tr>
<tr>
<td>Douglas M. Lucas, MBA</td>
<td>1995</td>
</tr>
<tr>
<td>Kenneth S. Field, MBA</td>
<td>1997</td>
</tr>
</tbody>
</table>

### Douglas M. Lucas Medalists

<table>
<thead>
<tr>
<th>Medalist</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sir Alec J. Jeffreys, DPhil</td>
<td>1999</td>
</tr>
<tr>
<td>Alan S. Curry, PhD</td>
<td>2002</td>
</tr>
<tr>
<td>Joseph Almog, PhD</td>
<td>2005</td>
</tr>
<tr>
<td>Clyde C. Snow, PhD</td>
<td>2008</td>
</tr>
<tr>
<td>Pierre A. J.-L. Margot, PhD</td>
<td>2011</td>
</tr>
<tr>
<td>Duarte N. Vieira, MD</td>
<td>2014</td>
</tr>
</tbody>
</table>

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### Odontology

**Chair:** Iain A. Pretty, DDS, PhD  
**Secretary:** Raymond G. Miller, DDS

**Pathology/Biology**  
**Chair:** J.C. Upshaw Downs, MD  
**Secretary:** Kathy H. Haden-Pinneri, MD

**Psychiatry & Behavioral Science**  
**Chair:** Christopher R. Thompson, MD  
**Secretary:** Karen B. Rosenbaum, MD

**Questioned Documents**  
**Chair:** Thomas W. Vastrick, BS  
**Secretary:** Linton Mohammed, PhD

**Toxicology**  
**Chair:** Dwan C. Fuller, BS  
**Secretary:** Sarah Kerrigan, PhD

---

### Distinguished Fellows

<table>
<thead>
<tr>
<th>Fellow</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abel M. Dominguez, PhD</td>
<td>1990</td>
</tr>
<tr>
<td>Kenneth S. Field, MBA</td>
<td>1990</td>
</tr>
<tr>
<td>Ordway Hilton, MA</td>
<td>1990</td>
</tr>
<tr>
<td>Douglas M. Lucas, MSc, DSc</td>
<td>1990</td>
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<tr>
<td>Irwin N. Perr, MD, JD</td>
<td>1990</td>
</tr>
<tr>
<td>Kurt M. Dubowski, PhD</td>
<td>1991</td>
</tr>
<tr>
<td>June K. Jones, MS</td>
<td>1991</td>
</tr>
<tr>
<td>Oliver C. Schroeder, Jr., JD</td>
<td>1991</td>
</tr>
<tr>
<td>Clyde C. Snow, PhD</td>
<td>1991</td>
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<tr>
<td>Robert H. Cravely, BS</td>
<td>1992</td>
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<tr>
<td>Richard C. Froede, MD</td>
<td>1992</td>
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<tr>
<td>Emanuel Tanay, MD</td>
<td>1992</td>
</tr>
<tr>
<td>Joseph H. Davis, MD</td>
<td>1993</td>
</tr>
<tr>
<td>Anthony Longhetti, BA</td>
<td>1993</td>
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<tr>
<td>Don Harper Mills, JD, MD</td>
<td>1993</td>
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<tr>
<td>William M. Bass III, PhD</td>
<td>1994</td>
</tr>
<tr>
<td>Henry C. Lee, PhD</td>
<td>1994</td>
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<tr>
<td>David J. Purtell, PhD</td>
<td>1994</td>
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<tr>
<td>Charles J. Stahl III, MD</td>
<td>1995</td>
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<tr>
<td>Irving Sunshine, PhD</td>
<td>1995</td>
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<tr>
<td>Yale H. Caplan, PhD</td>
<td>1996</td>
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<tr>
<td>James E. Starrs, LLM</td>
<td>1996</td>
</tr>
<tr>
<td>Homer R. Campbell, Jr., DDS</td>
<td>1998</td>
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<tr>
<td>Barry A.J. Fisher, MS, MBA</td>
<td>2001</td>
</tr>
<tr>
<td>Robert B. J. Dorion, DDS</td>
<td>2002</td>
</tr>
<tr>
<td>Richard S. Frank, BS</td>
<td>2002</td>
</tr>
<tr>
<td>Carla M. Noziglia, MS</td>
<td>2003</td>
</tr>
<tr>
<td>James L. Frost, MD</td>
<td>2004</td>
</tr>
<tr>
<td>Gerald L. Vale, DDS, JD</td>
<td>2004</td>
</tr>
<tr>
<td>Michael Finnegar, PhD</td>
<td>2005</td>
</tr>
<tr>
<td>Andre A. Moenssens, JD, LLM</td>
<td>2005</td>
</tr>
<tr>
<td>Michael A. Peat, PhD</td>
<td>2006</td>
</tr>
</tbody>
</table>

* Deceased
GENERAL INFORMATION

Registration Desk Hours

Hyatt Regency Orlando

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>February 15</td>
<td>1:00 p.m. - 5:00 p.m.</td>
</tr>
<tr>
<td>Monday</td>
<td>February 16</td>
<td>6:45 a.m. - 5:00 p.m.</td>
</tr>
<tr>
<td>Tuesday</td>
<td>February 17</td>
<td>6:45 a.m. - 6:00 p.m.</td>
</tr>
<tr>
<td>Wednesday</td>
<td>February 18</td>
<td>6:45 a.m. - 5:00 p.m.</td>
</tr>
<tr>
<td>Thursday</td>
<td>February 19</td>
<td>6:45 a.m. - 5:00 p.m.</td>
</tr>
<tr>
<td>Friday</td>
<td>February 20</td>
<td>6:45 a.m. - 4:00 p.m.</td>
</tr>
<tr>
<td>Saturday</td>
<td>February 21</td>
<td>7:30 a.m. - 9:30 a.m.</td>
</tr>
</tbody>
</table>

Exhibit Hall Hours

Hyatt Regency Orlando

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>February 18</td>
</tr>
<tr>
<td>Thursday</td>
<td>February 19</td>
</tr>
<tr>
<td>AAFS Reception</td>
<td>(Exhibits Open)</td>
</tr>
<tr>
<td>Friday</td>
<td>February 20</td>
</tr>
</tbody>
</table>

Attention Meeting Presenters

The Journal of Forensic Sciences encourages authors to submit previously unpublished reports and papers presented at the annual meeting.

Consult “Editorial Communications” which appears in each edition of the Journal for full instructions on manuscript preparation. Authors are encouraged to submit their manuscripts electronically via Manuscript Central: http://mc.manuscriptcentral.com/jofs. Alternately, manuscripts may be sent to:

Michael A. Peat, PhD
Editor, Journal of Forensic Sciences
6700 Woodlands Parkway, Suite 230-308
The Woodlands, TX 77381
Fax: (281) 419-6236
jfs.editor@att.net

Video and/or audio recording of any session(s) or parts thereof is not permitted without prior approval from the American Academy of Forensic Sciences.

English is the official language of the AAFS and its meetings; neither oral nor written translations will be provided.

Although precautions are taken to prevent schedule changes, speakers and program schedules may change due to unforeseen circumstances.

As a courtesy to others, meeting attendees are asked to turn off their cell phones when attending the sessions.
If a phone conversation must be held, please step outside of the meeting room.
AWARDS & RECEPTIONS

The R.B.H. Gradwohl Laureate Medallion and the Distinguished Fellow award will be presented on Wednesday, February 18, during the AAFS Annual Business Meeting. Join us in acknowledging your most distinguished colleagues as they are presented with these prestigious awards.

R.B.H. Gradwohl Laureate Medallion Honoree

Thomas T. Noguchi, MD

Distinguished Fellow Honoree

Marilyn A. Huestis, PhD

Section Awards will be presented during Section Business Meetings, also on Wednesday, February 18 (see Section Business Meeting start times on page 13). The Section Award recipients will be acknowledged again before the entire membership during the AAFS Annual Business Meeting along with the presentation of the Gradwohl Medallion and the Distinguished Fellow Award.

2015 Section Award Honorees

Anthropology Section’s
T. Dale Stewart Award
J. Lawrence Angel Award

William D. Haglund, PhD
Lauren R. Pharr, MA

Criminalistics Section’s
Paul L. Kirk Award
Mary E. Cowan Outstanding Service Award
Meritorious Service Award

Ira S. Lurie, PhD
Scott Ryland, BS
Steven B. Lee, PhD

Digital & Multimedia Sciences Section’s
Outstanding Research Award
Outstanding Case Study Award

Kathryn C. Seigfried-Spellar, PhD
Mark R. McCoy, EdD

Engineering Sciences Section’s
Founders Award
Andrew H. Payne, Jr., Special Achievement Award

Thomas P. Shefchick, BSEE
Sarah V. Hainsworth, PhD; and,
Darren Franck, MSME

General Section’s
Robert Gaffney Achievement Award
Paul W. Kehres Meritorious Service Award

Maher Noureddine, PhD
Vernon J. Geberth, MS

Odontology Section’s
Lester Luntz Award
Reidar F. Sognnaes Award of Excellence in Forensic Odontology

Philip J. Levine, DDS
Norman D. Sperber, DDS

Pathology/Biology Section’s
2014 Best Resident Paper Award
2014 Best Resident Paper Award Honorable Mention
Milton Helpren Award
Award for Achievement in the Forensic Life Sciences

Nicole Yarid, MD
Mehdi Koolaee, MD
Bruce A. Hyma, MD
Richard W. Merritt, PhD
AWARDS & RECEPTIONS

Toxicology Section's
Alexander O. Gettler Award
Marc A. LeBeau, PhD
Rolla N. Harger Award
Ashraf Mozayani, PharmD, PhD
Irving Sunshine Award
Jillian K. Yeakel, MS
June K. Jones Scholarship Award
Rebecca L. Hartman, BA

2015 AAFS Regional Award Winner
Southeastern Association of Forensic Document Examiners
Kate Butler, BS

2014-15 FSF Emerging Forensic Scientist Award Honoree

The FSF Emerging Forensic Scientist Award will be presented on Wednesday, February 18, 2015, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipient:

Nicolene Lottering, BS

2014-15 FSF Henry C. Lee Scholarship Recipient

The FSF Henry C. Lee Scholarship will be presented on Wednesday, February 18, 2015, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipient:

Gabriele C. Kruger, BSc

2014-15 FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant

The FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant will be presented on Wednesday, February 18, 2015, during the Criminalistics Section Business Meeting. You’ll want to be present to congratulate recipient:

Erin A. Laurie, BS.

RECEPTION INFORMATION

Welcome Bash (Welcoming Reception) — Tuesday, February 17 — 6:00 p.m. - 8:00 p.m.

This opening event is your opportunity to meet old friends and to make new acquaintances. Snacks and cash bars will be available.

AAFS 67th Annual Wine & Cheese Reception — Thursday, February 19 — 6:00 p.m. - 8:00 p.m.

The AAFS Wine & Cheese Reception will be held to celebrate what promises to be an excellent 2015 program and to toast your return to the Academy's 68th Annual Scientific Meeting in 2016 (Las Vegas, NV)!
The Sections

The Sections of the American Academy of Forensic Sciences will hold their annual business meetings on Wednesday, February 18. Some of the sections will hold a luncheon prior to the start of the business meeting. This is your opportunity to participate! Please attend and contribute to your section’s future plans. Specific times are noted below:

<table>
<thead>
<tr>
<th>Section</th>
<th>Luncheon</th>
<th>Business Meeting</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td></td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Criminalistics(^1)</td>
<td></td>
<td>12:00 p.m. - 3:45 p.m.</td>
<td>12:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Digital &amp; Multimedia Sciences(^2)</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td>2:15 p.m. - 3:45 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General(^2)</td>
<td>12:00 p.m. - 1:00 p.m.</td>
<td>1:15 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Jurisprudence(^2)</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Odontology</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology/Biology(^2)</td>
<td>12:00 p.m. - 1:30 p.m.</td>
<td>1:45 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Psychiatry &amp; Behavioral Science(^3)</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Questioned Documents</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxicology(^2)</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)This section will have a combined luncheon and business meeting. The luncheon is open to voting members of the Criminalistics Section.

\(^2\)These luncheons require pre-registration.

\(^3\)This luncheon requires pre-registration and is open only to members of the Psychiatry & Behavioral Science Section.

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The Annual Business Meeting of Fellows and Members — Attend to Win a Complimentary Meeting Registration!

The Annual Business Meeting of the Fellows and Members of AAFS will be held Wednesday, February 18, at 4:15 p.m., at the Hyatt Regency Orlando in Orlando, FL. It is essential that all Fellows and Members attend this very important meeting in order to reach a quorum for the voting process. Agenda items include the election of 2015-16 Officers, consideration of bylaws amendments, presentation of the Gradwohl Medallion and the Distinguished Fellow Award, and recognition of all Members being promoted to Fellow status. You also will be briefed on AAFS activities during the past year and plans for the future.

As an incentive to attend, all Fellows and Members present will automatically be entered in a drawing for a complimentary meeting registration to attend the 2016 AAFS Annual Scientific Meeting in Las Vegas, NV.
WELCOME TO ORLANDO, FLORIDA

A world-renowned destination, Orlando is the place to make all of your vacation dreams come true. Of course, it is beloved for its theme parks: Walt Disney World, Universal Studios Florida, SeaWorld Orlando, and many others. But it also beckons with world-class resorts, shopping opportunities for every budget, all-season golf courses, and some of the most enticing dining opportunities on the planet. Less known but equally inviting are the downtown sections of Orlando itself and many nearby towns in Central Florida – places that celebrate public art and take pride in offering a myriad of cultural opportunities. Come to Orlando – and bring the family – and wish upon a star.

Climate

Orlando weather in February is expected to be pleasant with temperatures generally averaging in the 70s in the day and cooling off in the upper 50s and 60s for comfortable evenings. On average, eight hours of sunshine per day can be expected throughout February. As is often the case, there is a chance of rain so come prepared with your umbrella.

Transportation

By Plane
Orlando International Airport (MCO) is the city’s primary airport and the busiest airport in the state in terms of passenger traffic. The airport is located to the southeast of downtown but is centrally located with respect to the region and area attractions. Orlando International Airport is a secondary hub for AirTran Airways, Southwest Airlines, & JetBlue Airways all of which fly numerous routes to/from Orlando. Additionally, Delta and American Airlines offer flights daily between Orlando and their super-hubs, Atlanta and Miami respectively. Non-stop service is offered to nearly every major city east of the Mississippi and to several major western cities (Los Angeles, San Francisco, Seattle, Phoenix, Las Vegas, Salt Lake City, and Denver).

By Train
Orlando has an Amtrak station that provides service to other destinations such as Miami but also connects to other points as far north as New York via the Silver Star and Silver Meteor lines. In nearby Sanford, the southern terminus of the Amtrak Auto Train which carries passengers and automobiles between Sanford and Lorton, Virginia, effectively serving as a car-rail link from Orlando to the Washington, DC Metro Area.

By Car
Driving to Orlando should be considered as a real and viable possibility for anyone with the geographic means. All Orlando attractions, including most major resorts and hotels are conveniently located off Interstate 4 which connects to I-95. Five minutes off of a choice of exits, depending on your destination, takes you anywhere you need to go. This can prove to be the most economical for your trip, as well as the most convenient.

Getting Around Orlando

By Car
Orlando is a sprawling city with most attractions lying far to the south of downtown and into adjacent cities like Kissimmee and Lake Buena Vista. The roads are easy to drive on with all major attractions well signed, but like most major cities, traffic jams around downtown are common in the afternoons and around the touristy areas on Friday nights and all day Saturday.
The main highway through Orlando (and the only interstate serving it) is Interstate 4 (I-4). In recent years, major construction has widened it through areas south of SR528 making it a commuter-friendly highway (except for traffic during rush hours and Friday and Saturday evenings). Downtown Orlando, International Drive, Amway Arena, the Mall at Millenia, and theme parks such as Walt Disney World, Universal Studios, Sea World, Discovery Cove, the Holy Land Experience, and Wet n’ Wild are all conveniently located along or near I-4. In Orlando, the main tourism area is International Drive, a strip of road that runs parallel to I-4 for about 10 miles (16 km). Many tourist-focused shops, restaurants, and attractions are to be found along this road.

**By Rental Car**
Orlando is the largest rental car market in the world and is known as capital of car rental companies, with all major car rental companies accessible. Operating directly within the airport are: Alamo, Avis, Budget, Dollar, Enterprise, E-Z Rent-A-Car, L & M Car Rental, National, and Thrifty; courtesy shuttles are available for transport to other rental companies.

If you arrive by air via Orlando International Airport and pick up a rental car there, you can go through the north exit and head to SR-528 West to get to International Drive, Universal Orlando, and SeaWorld. This will require $1.75 in tolls. Alternatively, you can take a direct route to Walt Disney World through the south exit to SR-417 South, following it to Exit 5, and taking SR 536 straight into Disney. This requires $2 in tolls. Toll booths along this expressway use open road tolling.

**By Trolley**
I-Ride Trolley, (407-248-9590), along International Drive and Universal Boulevard, this trolley primarily serves tourists in the attractions area, operating daily from 8:00 a.m. to 10:30 p.m. While the service is advertised as a trolley, the trolleys are in fact modified buses traveling in traffic with many stops, which makes for a slow ride. There are 85 stops along the main (Red) route on International Drive and 22 stops on the (Green) route that serves less congested Universal Blvd. The fare is $1.25 per ride for adults, 25¢ for seniors, and free to kids younger than 12; exact change is required. You may purchase an unlimited 1-day pass available for $4 per person. One-day and multi-day passes, not sold on the bus, are available in many locations. Because of the very limited route coverage of I-Ride, it goes nowhere near Disney; the better choice for many visitors is to use LYNX buses (e.g., bus 8, 42, 50, or 111).

**By Taxi**
Orlando is visited by millions of tourists each year and there are dozens of taxi companies that operate in the region. It will not be a problem to find transportation from the Orlando Airport to your hotel or from the hotel to a theme park, restaurant, or mall. If you are not planning to rent a car, you probably should do some research and arrange your own transportation before arriving to Orlando. A full list of companies permitted by the City of Orlando and the Aviation Authority can be found on the Orlando International Airport website (www.orlandoairports.net/transport/local_transport.htm). It is advisable to never hail a taxi off the street. Unfortunately, some of those companies do not have current license or insurance and operate illegally.

**By Shuttle**
There are various shuttles available in and around Orlando. Orlando Airport Van, Mears Transportation, and SuperShuttle, among others, provide service 24 hours-a-day, 7 days-a-week. Rates vary by location and start as low as $9.99. Many travelers find shuttles a faster and cheaper alternative to their more luxurious counterparts (i.e., taxis, private cars/sedans, etc.). A full list of companies permitted by the City of Orlando and the Aviation Authority can be found on the Orlando International Airport website (www.orlandoairports.net/transport/local_transport.htm).

**Sources:** Visit Orlando, www.visitorlando.com
Orlando International Airport, www.orlandoairports.net
ACCOMMODATIONS

AAFS 67th Annual Scientific Meeting
February 16-21, 2015
Hyatt Regency Orlando
Orlando, FL, U.S.A.

The American Academy of Forensic Sciences has selected the Hyatt Regency Orlando for your stay during the 67th Annual Scientific Meeting in Orlando, FL. The Hyatt Regency Orlando offers great amenities to help you during your stay.

For hotel availability during the AAFS 67th Annual Scientific Meeting, please go to the AAFS Annual Meeting “Accommodations” webpage to make your hotel reservation under the AAFS room block. By using this link on the AAFS Accommodations page, you will be taken to the hotel’s AAFS specific meetings page where you may secure your reservation at the group-contracted rate of $180 for either single or double rooms.

While early reservations are recommended to take advantage of discounted rates, please be sure to cancel your reservations prior to the Thursday, January 15, 2015, deadline if you are unable to attend or you cannot use the reservations. This will make the rooms available for other attendees and will help AAFS avoid the financial penalties associated with cancellations made after the room block closes.

Hyatt Regency Orlando
9801 International Drive
Orlando, FL, USA, 32819
Fax: +1 407 309 5676
Single/Double: $180

Conveniently situated in the center of International Drive, the Hyatt Regency Orlando brings you within minutes of world-famous theme parks while allowing you to escape to upscale accommodations and premium amenities. After an exciting day of meetings, attractions, performing arts and shopping, retire to elegantly appointed guestrooms, spacious suites or pet-friendly accommodations. Smooth granite and natural textures complement rich wood tones, and an in-room TV awaits in the bathroom.

All Accommodations Offer:
- Hyatt Grand Bed®
- Wireless high-speed Internet access
- Oversized work desk; speakerphone
- LCD flat-panel HD television on
  network and various cable stations,
  video on demand
- Video account review, video checkout
- Individual climate control
- Electronic door lock, in-room safety-
  deposit box
- Turn-down service available upon request
- Bath amenities; hair dryer; bathrobes
  provided in room
- Coffeemaker with complimentary coffee
  and tea
- In-room cooler
- Iron / ironing board
- iHome® alarm clock radio

Services & Facilities Offered
- 1-800-CHECK-IN®
- 24-hour in-room dining
- 10 restaurant outlets
- Full-service concierge; Hyatt E-Concierge
- Easy access to regional public
  transportation
- Multilingual staff

Other Amenities:
- Assisting listening devices
- Currency exchange
- Laundry / Dry Cleaning
- Valet parking rates $16 overnight, plus tax
- Self parking rates $26 overnight, plus tax
- 1-ride Trolley Transport access to
  attractions, local shopping, dining,
  and entertainment

Booking within the AAFS room block is an important way to support our organization and to keep overall meeting costs as low as possible. AAFS commits to a block of rooms at the Headquarter hotel on behalf of meeting attendees and has a financial obligation to fill those blocks. Please help us to avoid penalties and to control costs for future events by staying at the official hotel. Staying within the block is also more convenient and helps you stay connected with the informal activities and networking opportunities that occur at the hotel during the meeting. If you are required to reserve a room through your company’s travel department, please forward the booking link so that you can reserve a room in the AAFS room block. Thank you!
All meeting sessions are lectures with one or more speakers. Continuing professional education credits are offered for physicians, dentists, attorneys, and chemists. Continuing education credit applications have been submitted for physicians, dentists, attorneys, and chemists. Nurses may use the AAFS CME Credit Reporting Forms for filing CERP hours with their state accreditation agency. Please check with your state agency for details. In addition, AAFS offers a generic CE certificate which may be used for purposes not outlined above.

To register for continuing education credit, please complete the appropriate section on the meeting Registration Form. An individual must be a registrant to obtain continuing education credits. Fees charged for continuing education credits are based on projected costs of supplies and other materials needed to comply with requirements of the various continuing education accreditation agencies. The AAFS has adopted a user-pay approach so that those individuals who benefit from the specific continuing education program are responsible for the costs incurred.

In order to be in compliance with the various accrediting organizations, introductions, breaks, and lunches have been deducted from the total hours. Please note that continuing education credit is not available for all sessions. All continuing education credit recipients will receive documentation regarding the number of continuing education hours awarded. Attendance reports are supplied to the appropriate state or national agency, as required.

Objectives of the AAFS Continuing Education Program

To provide for multidisciplinary presentation, instruction, and discussion of relevant forensic science issues related to science, evidence and the law, and to research descriptive studies, technology and methods, diagnostics, interpretations, testimony, and administrative functions performed by forensic scientists in the disciplines of pathology, biology, odontology, anthropology, psychiatry & behavioral science, psychology, engineering sciences, toxicology, questioned document examination, criminalistics, jurisprudence, digital & multimedia sciences, and general forensic investigation.

Expected Outcome of Participation

A participant in the AAFS Continuing Education Program should: a) understand the perspectives and roles of the various forensic science disciplines; b) increase awareness of current forensic science issues; c) learn new technologies and methods; d) broaden diagnostic acumen; e) gain practical knowledge to modify current practices; f) affirm current concepts and practices; g) improve interpretative skills regarding evidence, observations, and information; h) interact with colleagues; and, i) expand one's historical perspective on the forensic sciences.

Faculty Disclosure Policy

As a sponsor of continuing education, the American Academy of Forensic Sciences must insure balance, independence, objectivity, and scientific rigor in all its educational activities. All faculty participating in a sponsoring activity are expected to disclose any relevant financial interest or other relationship for themselves, spouses, and/or partner: (1) with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in an educational presentation; and, (2) with any commercial supporters of the activity. (Relevant financial interest or other relationship can include such things as: salary, royalty, consulting fee, intellectual property rights, honoraria, ownership interest (e.g., stocks, stock options or other ownership interest, excluding diversified mutual funds), or other financial benefit. Or, role(s) such as: employment, management position, independent contractor (including contracted research), consulting, speaking and caching. Membership on advisory committees or review panels, board membership, and “other activities.” AAFS has an established policy regarding conflicts of interest that includes decisions the Program Committee members may make in selecting content for the Annual Scientific Meeting Program. By serving on the committee, regardless of role, each member has agreed to comply with Section 1.4.7. of the AAFS Policy and Procedure Manual.

To serve on the 2014-15 Program Committees, it is required that relevant AAFS staff members, program committee members, and/or reviewers to complete a Financial Disclosure form before they were provided access to review submissions for the program. For continuing education accreditation purposes, the disclosed relationships are published so that learners are aware of the nature of any relationships that may impact the selection of presentations for the program. If a committee member failed to provide complete disclosure of a relevant financial interest or relationship, the committee member or reviewer was not allowed to serve. The executed Faculty Disclosure Forms are on file in the AAFS Office.

American Board of Criminalists Approval

The American Academy of Forensic Sciences (AAFS) is approved by the American Board of Criminalistics (ABC) to offer continuing education points for approved workshops for criminalists and forensic scientists. The ABC maintains responsibility for the program, and credit may be awarded to ABC Fellows, Diplomates, and Affiliates.
CONTINUING EDUCATION

Overall Purpose and Objective Statements for Major Aspects of AAFS Programs

Workshops and Special Sessions
Purpose: To provide an opportunity for experts to present material and to lead discussion and practical exercises related to forensic science methods, procedures, diagnosis, investigation, professional relations and practices, communication, administration, and professional development.

Educational Objectives: Detailed individually in each workshop and special session announcement and description.

CE Credit: Varies from 1.5 credit hours to 16 credit hours depending on sessions.

Breakfast/Luncheon Seminars
Purpose: To provide an opportunity for presentation and discussion of relevant historical and current topics of forensic science interest related to specific case investigations, or general or specific investigative needs and procedures, methodologies, and testimony.

Educational Objectives: Detailed individually in each breakfast/luncheon seminar announcement and description.

CE Credit: Designated for a maximum of .75 credit hour for Breakfast Seminars and 1.0 credit hour for Luncheon Seminars.

Plenary Session
Purpose: To provide a multidisciplinary presentation and discussion of issues related to the forensic science profession.

Educational Objectives: Attendees will be able to: a) identify the challenges the forensic science profession has faced and will continue to face in terms of ensuring quality; b) identify ways to deal with the variances each challenge presents; and, c) identify the entities which have influence over setting the quality standards in the field of forensic science.

CE Credit: Designated for a maximum of 1.75 credit hours.

Bring Your Own Slides
Purpose: To enable guided but spontaneous discussion and instruction related primarily to challenging death investigation cases involving forensic pathology and other related forensic science issues. Presented cases are used as a focal point for improving diagnostic methods and interpretation of pathologic findings and related evidence, and for presenting case-related information on previously unreported or rarely occurring cases which may alert forensic pathologists and scientists to information useful in future death investigations.

Educational Objectives: Attendees will be able to: a) discuss issues of importance regarding interpretation of selected wounds, diseases and evidence; b) provide arguments for and against opinions raised during specific case discussions; and, c) recognize when consultation with other experts may be indicated.

CE Credit: Designated for a maximum of 2.0 credit hours.

Oral and Poster Section Scientific Sessions
Purpose: To provide an opportunity for presentation and discussion of case reports, descriptive studies, review presentations, research, administrative issues, and investigative/diagnostic methods regarding topics and issues of importance to a primary discipline among the forensic sciences.

Educational Objectives: To meet the educational objectives stated by each presenter for his/her presentation.

CE Credit: Varies according to the individual’s session attendance. Designated for a maximum of 25.0 credit hours.

Last Word Society
Purpose: To provide a retrospective forensic analysis of historical events and to provide education about the history and evolution of forensic sciences as well as the modern methods and technologies used to re-examine past events of forensic science interest. Emphasis is placed on the evaluation of the original opinions and case outcome and on the development of newer hypotheses based on the re-analysis.

Educational Objectives: To meet the educational objectives stated by each presenter for his/her presentation.

CE Credit: Designated for a maximum of 2.0 credit hours.
CONTINUING EDUCATION

Guidelines For Claiming Credit

As the sponsor of Continuing Education Credit, the AAFS recognizes that the forensic science disciplines are inextricably linked and that inter-disciplinary knowledge is critical to promote competence in forensic practice. As a result, the claiming of credit for various continuing education activities related to medicine, dentistry, law, chemistry, and other forensic disciplines need not be limited to one’s primary professional specialty. For example, a forensic pathologist from the Pathology/Biology Section may gain very useful and relevant information by attending a presentation in the Anthropology Section scientific session. It is appropriate to claim continuing medical education credit for that session. Many other examples exist where the claiming of continuing education credit is appropriate for attending sessions that cover material related to, but which lay outside of, one’s primary professional area of expertise.

It is the conference attendee’s responsibility to document which program sessions were attended and to determine those sessions for which continuing education credit may be claimed. The AAFS operates under the assumption that meeting attendees will, in general, be unlikely to attend sessions that will not be beneficial to their professional practice and that the claim for continuing education credit is justified if a session contains scientific or practice-related information that may bring new knowledge, may affirm current knowledge, or may provide information that could possibly modify one’s professional practices.

Those who wish to receive continuing education credit must register and pay for this service on the meeting Registration Form. CE Credit Request Forms will be available at the registration desk. The completed forms must be returned to AAFS by the designated deadline.

Chemistry

Application will be made to the American Association for Clinical Chemistry, Inc., in order for AAFS to offer ACCENT® credit. Credit will be awarded on an hour-for-hour basis.

Dental

The American Academy of Forensic Sciences is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing education programs of this program provider are accepted by AGD for Fellowship/Mastership and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 1/1/13 to 12/31/16. Provider ID: 218044

Legal

Application will be made to The Florida Bar in order for AAFS to offer CLE credit to attorneys licensed in the state of Florida. Continuing legal education credit will be awarded on an hour-for-hour basis.

Please contact Continuing Education Coordinator Kimberly Wrasse, kwrasse@aafs.org, no later than January 1 if you require CLE provider accreditation from another state. AAFS will apply for accreditation if you are licensed in a state that will not accept AAFS issued CLE credit to be submitted by the attorney.

Medical

The American Academy of Forensic Sciences (AAFS) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The American Academy of Forensic Sciences designates this live activity for a maximum of 60 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
The American Academy of Forensic Sciences would like to thank the following supporters for their contributions to the 2015 AAFS 67th Annual Scientific Meeting:

Aegis Sciences Corporation
Cerilliant
Human Relations Institute & Clinics
Immunalysis Corporation
Lipomed Inc
NMS Labs
QIAGEN Inc
RTI International
Shamrock Glass Company
SPEware Corporation
The Academy would like to thank Qiagen Inc. for its contribution to the 2015 Guidebook Mobile App:

Schedules, Maps, Exhibitor information, and more are available on your mobile device - completely free.

Download Guidebook on the Apple App Store or Android Marketplace, or visit m.guidebook.com.
AAFS 67th Annual Scientific Meeting
Calendar of Events

Saturday, February 14, 2015
8:00 a.m. - 5:00 p.m. American Board of Criminalistics (ABC) Board of Directors
8:00 a.m. - 5:00 p.m. ABC Examination Committee
8:00 a.m. - 5:00 p.m. U.S. Army CID Criminalistics Committee
8:45 a.m. - 5:30 p.m. Forensic Specialties Accreditation Board (FSAB)
9:00 a.m. - 5:00 p.m. ABFO Examination
9:30 a.m. - 11:00 a.m. ASTM E30.90 Executive Subcommittee
11:00 a.m. - 12:00 p.m. ASTM E30 Main Committee Opening
11:00 a.m. - 5:00 p.m. Forensic Science Education Programs Accreditation Commission (FEPAC) Business Meeting
1:00 p.m. - 5:00 p.m. ASTM E30.01 Criminalistics
1:00 p.m. - 5:00 p.m. ASTM E30.12 Digital and Multimedia Evidence

Sunday, February 15, 2015
8:00 a.m. - 5:00 p.m. ABC Board of Directors
8:00 a.m. - 5:00 p.m. ABC Examination Committee
8:00 a.m. - 5:00 p.m. Forensic Science Education Programs Accreditation Commission (FEPAC) Business Meeting
8:00 a.m. - 5:00 p.m. International Association of Coroners & Medical Examiners (IAC&ME) Executive Board
8:00 a.m. - 5:00 p.m. U.S. Army CID Criminalistics Committee
8:00 a.m. - 5:30 p.m. American Board of Forensic Odontology (ABFO) Bitemark Workshop - Main Lecture
8:30 a.m. - 5:00 p.m. ABFO Bitemark Workshop - Breakout Room
8:30 a.m. - 5:00 p.m. ABFO Bitemark Workshop - Breakout Room
8:30 a.m. - 5:00 p.m. ABFO Continuing Education Committee
8:45 a.m. - 5:30 p.m. Forensic Specialties Accreditation Board (FSAB)
9:00 a.m. - 12:00 p.m. ASTM E30.01 Criminalistics
9:00 a.m. - 12:00 p.m. ASTM E30.11 Interdisciplinary Forensic Science
1:00 p.m. - 12:00 p.m. Named E30.01 Criminalistics
1:00 p.m. - 3:00 p.m. ASTM E30.01 Criminalistics
1:00 p.m. - 5:00 p.m. American Board of Forensic Anthropology (ABFA) Annual Board Certification Examination
1:00 p.m. - 6:00 p.m. AAFS Speaker Ready Room
3:00 p.m. - 3:45 p.m. Workshop #1: Mass Fatality Incidents: An Integrated Approach (Pre-Registration Required)
3:00 p.m. - 3:45 p.m. Workshop #2: The Electrophysiology of Impulsive Aggression and Criminal Responsibility (Pre-Registration Required)
7:00 a.m. - 8:00 p.m. American Board of Criminalistics (ABC) Board of Directors
7:00 a.m. - 8:30 a.m. Breakfast #1: Wildland Fires of Electrical Origin — Deaths and Litigation (Pre-Registration Required)
7:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
7:00 a.m. - 11:00 p.m. Press Room
8:00 a.m. - 11:30 a.m. Organization for Scientific Area Committees (OSAC): Digital/Multimedia Scientific Area Committee Public Meeting — Priorities and Public Comment (Offsite)
8:00 a.m. - 5:00 p.m. AAFS Speaker Ready Room
8:00 a.m. - 5:00 p.m. AAFS Speaker Ready Room
8:00 a.m. - 12:00 p.m. Workshop #1: Mass Fatality Incidents: An Integrated Approach (Pre-Registration Required)
8:00 a.m. - 12:00 p.m. Workshop #2: The Electrophysiology of Impulsive Aggression and Criminal Responsibility (Pre-Registration Required)
8:00 a.m. - 4:30 p.m. Workshop #3: Classification of Typewritten Documents (Pre-Registration Required)
8:00 a.m. - 4:45 p.m. Workshop #4: Obtaining Successful DNA Profiles in Challenging Samples (Pre-Registration Required)
8:00 a.m. - 5:00 p.m. Workshop #5: Ancestry Estimation in the 21st Century (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #6: Practical Homicide Investigation®: Offender-Manipulated Homicide Scenes Relating to Equivocal Death and Staged Crime Scenes (Pre-Registration Required)
8:30 a.m. - 5:30 p.m. Workshop #7: Challenges in Fire Debris Analysis (Pre-Registration Required)
8:30 a.m. - 5:30 p.m. Workshop #8: From Fire Dynamics to Legal Dynamics: Shifted Science and the Criminal Justice System’s Response (Pre-Registration Required)
8:30 a.m. - 5:30 p.m. Workshop #9: Forensic Anthropology and Cold Case Investigations: Breaking the Ice (Pre-Registration Required)
8:30 a.m. - 5:30 p.m. Workshop #10: NamUs: The Results of Forensic Collaboration (Pre-Registration Required)
9:00 a.m. - 6:00 p.m. American Board of Forensic Toxicology (ABFT) Examination Committee
9:00 a.m. - 6:00 p.m. ABFT Policies and Procedures Committee
10:00 a.m. - 12:00 p.m. ABFO Bitemark Committee
12:30 p.m. - 5:00 p.m. OSAC: Crime Scene/Death Investigation Scientific Area Committee Public Meeting – Priorities and Public Comment (Offsite)
1:00 p.m. - 5:00 p.m. Workshop #11: RADid: Using Radiologic Technologies to Identify Unknown Decedents (Pre-Registration Required)
1:00 p.m. - 5:00 p.m. Workshop #12: Implementing and Evaluating 3D Technology in a 2D World (Pre-Registration Required)
1:00 p.m. - 5:00 p.m. Workshop #13: The Examination of Skillfully Simulated Signatures (Pre-Registration Required)
1:00 p.m. - 5:30 p.m. Workshop #14: On the Leading Edge of Forensic Science (Pre-Registration Required)
3:00 p.m. - 5:00 p.m. NAME Journal Editorial Board
5:00 p.m. - 8:00 p.m. ABFO Combined Executive Committee and Board of Directors
6:00 p.m. - 11:30 p.m. NAME Executive Committee
7:00 p.m. - 10:00 p.m. OSAC: Biology/DNA Scientific Area Committee Public Meeting – Priorities and Public Comment (Offsite)
8:00 p.m. - 10:00 p.m. ABFO Diplomates Annual Meeting

Tuesday, February 17, 2015

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 6:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:00 a.m. NAME Foundation Board of Trustees
7:00 a.m. - 8:30 a.m. Breakfast #2: Mental Health Support to Law Enforcement: Practical Issues (Pre-Registration Required)
7:00 a.m. - 8:30 a.m. Breakfast #3: Bank Robbery on Chicago’s South Side — 75 Years After John Dillinger (Pre-Registration Required)
7:00 a.m. - 9:00 a.m. Toxicology Section Steering Committee
7:00 a.m. - 5:30 p.m. American Society of Forensic Odontology (ASFO) 45th Annual Scientific Session
7:00 a.m. - 6:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 a.m. Press Room
8:00 a.m. - 12:00 p.m. NAME Board of Directors
8:00 a.m. - 12:30 p.m. OSAC: Chemistry/Instrumental Analysis Scientific Area Committee Public Meeting – Priorities and Public Comment (Offsite)
8:00 a.m. - 5:00 p.m. National Institute of Justice (NIJ) Innovation Showcase
8:00 a.m. - 10:00 p.m. International Board of Forensic Engineering Sciences (IBFES) Oral Examinations and Directors Meeting
8:30 a.m. - 12:00 p.m. Forensic Sciences Foundation (FSF) Board of Trustees
8:30 a.m. - 12:00 p.m. Workshop #15: Clinical Toxicology of the Poisoned Patient (Pre-Registration Required)
8:30 a.m. - 12:15 p.m. Special Session #1: Interdisciplinary Symposium - Past Presidents Future Science: Hot Leads in Contemporary Forensic Research (Pre-Registration Required)
8:30 a.m. - 1:00 p.m. Workshop #16: “Your Attention, Please!” — A Public Speaking Skills Workshop (Pre-Registration Required)
8:30 a.m. - 3:30 p.m. FEPAC: Accreditation of Forensic Science Academic Programs Through the AAFS
8:30 a.m. - 5:00 p.m. Special Session #2: Young Forensic Scientists Forum (YFSF) 20th Anniversary: The Past, the Present, and Our Future (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #17: Quality Assurance in Human Identification (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #18: Sadism: Distinguishing between Criminal Behavior and Offender Analysis (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #19: Automating Image Production Forensic Document Examiners (Pre-Registration Required)
### CALENDAR OF EVENTS

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m. - 5:00 p.m.</td>
<td>Workshop #20: Cognitive Bias Issues in the Forensic Analysis of Pattern and Impression Evidence and in Medicolegal Evaluations (Pre-Registration Required)</td>
</tr>
<tr>
<td>8:30 a.m. - 5:00 p.m.</td>
<td>Workshop #21: Death in a Bathtub: The Trial of Drew Peterson (Pre-Registration Required)</td>
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<tr>
<td>8:30 a.m. - 5:30 p.m.</td>
<td>Workshop #22: Looking Toward a Greater Awareness of Youth Street Gangs (Pre-Registration Required)</td>
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<tr>
<td>9:00 a.m. - 12:00 p.m.</td>
<td>AAFS 2015 Annual Meeting Program Committee Review &amp; Breakfast</td>
</tr>
<tr>
<td>9:00 a.m. - 12:00 p.m.</td>
<td>ABFT Accreditation Committee</td>
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<tr>
<td>9:00 a.m. - 12:00 p.m.</td>
<td>ABFT Examination Committee</td>
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<tr>
<td>9:00 a.m. - 1:00 p.m.</td>
<td>ABFT Examination for Certification</td>
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<tr>
<td>9:00 a.m. - 2:00 p.m.</td>
<td>AAFS Student Academy</td>
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<tr>
<td>9:00 a.m. - 4:00 p.m.</td>
<td>NAME 2015 Interim Scientific Program Registration</td>
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<tr>
<td>9:00 a.m. - 5:00 p.m.</td>
<td>Workshop #23: Hands-On Evaluation of the Thanatomicrobiome and Epinecrotic Communities (Pre-Registration Required)</td>
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<tr>
<td>12:00 p.m. - 2:00 p.m.</td>
<td>AAFS 2015 Section Officers Luncheon &amp; Meeting</td>
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<tr>
<td>12:00 p.m. - 2:00 p.m.</td>
<td>45th Annual Business Meeting and Luncheon of the ASFO</td>
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<tr>
<td>12:00 p.m. - 6:00 p.m.</td>
<td>ABFT Board of Directors</td>
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<tr>
<td>12:30 p.m. - 2:30 p.m.</td>
<td>AAFS Long Term Planning Committee (LTPC)</td>
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<tr>
<td>12:55 p.m. - 5:00 p.m.</td>
<td>NAME 2015 Interim Scientific Program</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>OSAC: Physics/Pattern Interpretation Scientific Area Committee Public Meeting – Priorities and Public Comment (Offsite)</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>Workshop #24: Scientific Neutrality in Expert Witness Testimony (Pre-Registration Required)</td>
</tr>
<tr>
<td>3:00 p.m. - 12:00 a.m.</td>
<td>ABFA Annual Board of Directors</td>
</tr>
<tr>
<td>3:30 p.m. - 4:30 p.m.</td>
<td>FEPAC Program Directors</td>
</tr>
<tr>
<td>5:30 p.m. - 7:30 p.m.</td>
<td>Society of Forensic Anthropologists (SOFA) Board</td>
</tr>
<tr>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>ACADEMY BASH (Welcoming Reception)</td>
</tr>
<tr>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>Employment Forum/Job Fair</td>
</tr>
<tr>
<td>7:00 p.m. - 8:30 p.m.</td>
<td>YFSF Bring Your Own Posters</td>
</tr>
<tr>
<td>8:00 p.m. - 9:30 p.m.</td>
<td>Evening Session: Forensic Sciences — Keep It Simple, Stupid!</td>
</tr>
<tr>
<td>8:00 p.m. - 10:00 p.m.</td>
<td>Diversity and Inclusion in Forensic Sciences Reception</td>
</tr>
</tbody>
</table>

### Wednesday, February 18, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 a.m. - 6:00 p.m.</td>
<td>AAFS Speaker Ready Room</td>
</tr>
<tr>
<td>6:45 a.m. - 5:00 p.m.</td>
<td>AAFS REGISTRATION OPEN</td>
</tr>
<tr>
<td>7:00 a.m. - 8:30 a.m.</td>
<td>Breakfast #4: Crime Scene Reconstruction of Nine United States Air Force Active Duty Members Killed in Kabul, Afghanistan (Pre-Registration Required)</td>
</tr>
<tr>
<td>7:00 a.m. - 8:30 a.m.</td>
<td>International Attendee Welcome Breakfast (by Invitation Only)</td>
</tr>
<tr>
<td>7:00 a.m. - 12:00 p.m.</td>
<td>ABC Certification Examination</td>
</tr>
<tr>
<td>7:00 a.m. - 12:30 p.m.</td>
<td>Society of Forensic Toxicologists (SOFT) Board of Directors Interim Meeting</td>
</tr>
<tr>
<td>7:00 a.m. - 6:00 p.m.</td>
<td>AAFS Cyber Cafe</td>
</tr>
<tr>
<td>7:00 a.m. - 11:00 p.m.</td>
<td>Press Room</td>
</tr>
<tr>
<td>7:30 a.m. - 9:00 a.m.</td>
<td>AAFS Government Relations Committee</td>
</tr>
<tr>
<td>8:00 a.m. - 8:45 a.m.</td>
<td>AAFS ACADEMY CUP</td>
</tr>
<tr>
<td>8:00 a.m. - 9:00 a.m.</td>
<td>AAFS Continuing Education Committee</td>
</tr>
<tr>
<td>8:30 a.m. - 11:30 a.m.</td>
<td>American Dental Association (ADA) JWG 10.12 Forensic Odontology Informatics</td>
</tr>
<tr>
<td>9:00 a.m. - 11:00 a.m.</td>
<td>AAFS PLENARY SESSION</td>
</tr>
<tr>
<td>9:00 a.m. - 11:00 a.m.</td>
<td>ABFO Age Estimation Committee</td>
</tr>
<tr>
<td>11:00 a.m. - 12:00 p.m.</td>
<td>AAFS Membership Application “How To” Session</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Poster Sessions – Anthropology, Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry &amp; Behavioral Science, Questioned Documents Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.</td>
</tr>
<tr>
<td>11:30 a.m. - 4:00 p.m.</td>
<td>EXHIBITS OPEN</td>
</tr>
<tr>
<td>12:00 p.m. - 1:00 p.m.</td>
<td>General Section Luncheon (Pre-Registration Required)</td>
</tr>
<tr>
<td>12:00 p.m. - 1:30 p.m.</td>
<td>Pathology/Biology Section Luncheon (Pre-Registration Required)</td>
</tr>
<tr>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>Digital &amp; Multimedia Sciences Section Luncheon (Pre-Registration Required)</td>
</tr>
</tbody>
</table>
12:00 p.m. - 1:45 p.m. Jurisprudence Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Odontology Section Executive Committee Luncheon
12:00 p.m. - 1:45 p.m. Psychiatry & Behavioral Science Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Toxicology Section Luncheon (Pre-Registration Required)
12:00 p.m. - 3:45 p.m. Criminalistics Section Business Meeting & Luncheon
12:30 p.m. - 1:30 p.m. ABFA Diplomates
1:00 p.m. - 2:00 p.m. AAFS Abstract Submission “How To” Session
1:00 p.m. - 2:00 p.m. Human Decomposition Research Facility Directors
1:00 p.m. - 2:00 p.m. SOFT Drug Facilitated Crimes (DFC) Committee
1:15 p.m. - 3:45 p.m. General Section Business Meeting
1:45 p.m. - 3:45 p.m. Pathology/Biology Section Business Meeting
2:00 p.m. - 3:45 p.m. Anthropology Section Business Meeting
2:00 p.m. - 3:45 p.m. Digital & Multimedia Sciences Section Business Meeting
2:00 p.m. - 3:45 p.m. Jurisprudence Section Business Meeting
2:00 p.m. - 3:45 p.m. Odontology Section Business Meeting
2:00 p.m. - 3:45 p.m. Psychiatry & Behavioral Science Section Business Meeting
2:00 p.m. - 3:45 p.m. Questioned Documents Section Business Meeting
2:00 p.m. - 3:45 p.m. Toxicology Section Business Meeting
2:15 p.m. - 3:45 p.m. Engineering Sciences Section Business Meeting
4:15 p.m. - 5:30 p.m. AAFS ANNUAL BUSINESS MEETING & AWARDS CEREMONY
5:30 p.m. - 7:30 p.m. SOFA General Membership Meeting
6:00 p.m. - 7:00 p.m. YFSF Bring Your Own Slides
6:00 p.m. - 7:30 p.m. Boston University BMFS Alumni & Faculty
6:00 p.m. - 8:00 p.m. University of Alabama at Birmingham Alumni and Student Reception
6:00 p.m. - 8:30 p.m. Promega Genetic Identity Reception
7:00 p.m. - 9:00 p.m. Duquesne University MS-FSL Reception
7:00 p.m. - 9:00 p.m. The George Washington University Forensic Sciences Alumni Reception
7:00 p.m. - 9:00 p.m. John Jay College Alumni Reunion
7:30 p.m. - 9:00 p.m. Toxicology Section Poster Session
8:00 p.m. - 10:00 p.m. ABC Ice Cream Social
8:00 p.m. - 10:00 p.m. Bring Your Own Slides
8:00 p.m. - 10:00 p.m. University of New Haven Alumni and Student Reception
8:00 p.m. - 10:00 p.m. Virginia Commonwealth University Alumni and Student Reception

Thursday, February 19, 2015

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 5:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:30 a.m. Breakfast #5: The Roso Case: An Unpublished Trial Regarding Hermaphroditism Verified Through the Expertise and Written Advice of Leading Physicians in 19th-Century Florence (Pre-Registration Required)
7:00 a.m. - 8:30 a.m. Breakfast #6: Recent Changes in the Pharmaceutical Industry Operations: Boon or Bane? (Pre-Registration Required)
7:00 a.m. - 10:00 a.m. YFSF Annual Breakfast (Pre-Registration Required)
7:00 a.m. - 6:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 p.m. Press Room
7:30 a.m. - 8:00 a.m. AAFS Moderator’s “How To” Preview
7:30 a.m. - 9:00 a.m. AAFS Policy and Procedure Committee
9:00 a.m. - 11:30 a.m. Council of Federal Forensic Laboratory Directors (CFFLD)
9:00 a.m. - 2:00 p.m. EXHIBITS OPEN
11:30 a.m. - 1:00 p.m. Poster Sessions – Anthropology, Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Odontology, Pathology/Biology, Psychiatry & Behavioral Science
   Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.
# CALENDAR OF EVENTS

## Scientific Sessions – Morning

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. - 10:15 a.m.</td>
<td>Multidisciplinary Session: Psychiatry &amp; Behavioral Science/Toxicology</td>
</tr>
<tr>
<td>8:25 a.m. - 12:00 p.m.</td>
<td>Criminalistics Session I</td>
</tr>
<tr>
<td>8:30 a.m. - 11:30 a.m.</td>
<td>Anthropology Session I</td>
</tr>
<tr>
<td>8:30 a.m. - 11:55 a.m.</td>
<td>Engineering Sciences Session II</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Digital &amp; Multimedia Sciences</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Engineering Sciences Session I</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>General</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Jurisprudence Session I</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Multidisciplinary Session: Anthropology Session II/Criminalistics Session II</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Odontology</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Pathology/Biology Session I</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Questioned Documents</td>
</tr>
<tr>
<td>9:00 a.m. - 11:50 a.m.</td>
<td>Pathology/Biology Session II</td>
</tr>
<tr>
<td>10:15 a.m. - 12:00 p.m.</td>
<td>Psychiatry &amp; Behavioral Science</td>
</tr>
<tr>
<td>10:15 a.m. - 12:00 p.m.</td>
<td>Toxicology</td>
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</tbody>
</table>

## Scientific Sessions – Afternoon

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>1:00 p.m. - 4:30 p.m.</td>
<td>Toxicology</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>General</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>Jurisprudence Session I</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>Multidisciplinary Session: Engineering Sciences Session II/Jurisprudence Session II</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>Psychiatry &amp; Behavioral Science</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>Questioned Documents</td>
</tr>
<tr>
<td>1:00 p.m. - 5:10 p.m.</td>
<td>Criminalistics Session I</td>
</tr>
<tr>
<td>1:00 p.m. - 5:30 p.m.</td>
<td>Criminalistics Session II</td>
</tr>
<tr>
<td>1:00 p.m. - 5:30 p.m.</td>
<td>Digital &amp; Multimedia Sciences</td>
</tr>
<tr>
<td>1:15 p.m. - 4:30 p.m.</td>
<td>Pathology/Biology Session I</td>
</tr>
<tr>
<td>1:15 p.m. - 4:45 p.m.</td>
<td>Engineering Sciences Session I</td>
</tr>
<tr>
<td>1:15 p.m. - 5:30 p.m.</td>
<td>Anthropology Session I</td>
</tr>
<tr>
<td>1:30 p.m. - 5:35 p.m.</td>
<td>Odontology</td>
</tr>
<tr>
<td>2:00 p.m. - 4:00 p.m.</td>
<td>Pathology/Biology Session II</td>
</tr>
</tbody>
</table>

## Friday, February 20, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 a.m. - 6:00 p.m.</td>
<td>AAFS Speaker Ready Room</td>
</tr>
<tr>
<td>6:45 a.m. - 4:00 p.m.</td>
<td>AAFS REGISTRATION OPEN</td>
</tr>
<tr>
<td>7:00 a.m. - 8:30 a.m.</td>
<td>Breakfast #7: The Businessman, the Wife, the Aunt, and the Children: Multiple Murders by Drowning (Pre-Registration Required)</td>
</tr>
<tr>
<td>7:00 a.m. - 8:30 a.m.</td>
<td>Breakfast #8: Tom Krauss Memorial Bitemark Breakfast: From Frye to Daubert — A Change in Legal Standard (Pre-Registration Required)</td>
</tr>
<tr>
<td>7:00 a.m. - 4:00 p.m.</td>
<td>AAFS Cyber Cafe</td>
</tr>
</tbody>
</table>
CALENDAR OF EVENTS

7:00 a.m. - 11:00 p.m.  Press Room
8:00 a.m. - 9:15 a.m.  AAFS 2015-16 Nominating Committee
9:00 a.m. - 1:00 p.m.  EXHIBITS OPEN
9:30 a.m. - 10:30 a.m.  AAFS 2015-16 Section Officers
10:30 a.m. - 11:30 a.m.  AAFS 2015-16 Program Committee

Scientific Sessions – Morning
8:15 a.m. - 10:25 a.m. Multidisciplinary Session: Pathology/Biology Session II/Toxicology
8:15 a.m. - 12:00 p.m. Criminalistics Session II
8:25 a.m. - 12:00 p.m. Criminalistics Session I
8:30 a.m. - 12:00 p.m. Engineering Sciences Session I
8:30 a.m. - 11:15 a.m. Engineering Sciences Session II
8:30 a.m. - 12:00 p.m. General
8:30 a.m. - 12:00 p.m. Jurisprudence
8:30 a.m. - 12:00 p.m. Odontology
8:30 a.m. - 12:00 p.m. Pathology/Biology Session I
8:30 a.m. - 12:00 p.m. Psychiatry & Behavioral Science
8:30 a.m. - 12:00 p.m. Questioned Documents
8:30 a.m. - 12:30 p.m. Anthropology
10:30 a.m. - 12:00 p.m. Pathology/Biology Session II
10:30 a.m. - 12:00 p.m. Toxicology

Scientific Sessions – Afternoon
1:00 p.m. - 4:00 p.m. Engineering Sciences Session I
1:00 p.m. - 4:00 p.m. Toxicology
1:00 p.m. - 4:30 p.m. Engineering Sciences Session II
1:00 p.m. - 4:30 p.m. Psychiatry & Behavioral Science
1:00 p.m. - 5:00 p.m. Criminalistics Session I
1:00 p.m. - 5:00 p.m. Jurisprudence
1:00 p.m. - 5:00 p.m. Multidisciplinary Session: Criminalistics Session III/General/Questioned Documents
1:00 p.m. - 5:00 p.m. Pathology/Biology Session I
1:00 p.m. - 5:00 p.m. Pathology/Biology Session II
1:00 p.m. - 5:30 p.m. Criminalistics Session II
1:30 p.m. - 5:15 p.m. Odontology
1:45 p.m. - 5:30 p.m. Anthropology
12:00 p.m. - 1:30 p.m. AAFS Past Presidents Council Luncheon
12:00 p.m. - 1:30 p.m. Luncheon #2: The Dating Game Killer: Rodney Alcala's 40-Year Dance With Death (Pre-Registration Required)
7:00 p.m. - 9:00 p.m. Criminalistics Evening Session

Saturday, February 21, 2015
6:00 a.m. - 12:00 p.m. AAFS Speaker Ready Room
7:00 a.m. - 9:30 a.m. AAFS 2015-16 Board of Directors
7:30 a.m. - 9:30 a.m. AAFS REGISTRATION OPEN
8:00 a.m. - 5:00 p.m. ABFO Age Estimation Workshop

Scientific Sessions – Morning
8:30 a.m. - 12:00 p.m. Criminalistics Session I
8:30 a.m. - 12:00 p.m. Criminalistics Session II
8:30 a.m. - 12:00 p.m. Jurisprudence
8:30 a.m. - 12:00 p.m. Pathology/Biology
8:30 a.m. - 12:30 p.m. Anthropology
9:00 a.m. - 12:00 p.m. Psychiatry & Behavioral Science
Tuesday
February 17, 2015 — 9:00 a.m. - 2:00 p.m.

The purpose of the Student Academy of Forensic Sciences is to bring to the attention of local area high school and college students the vital importance of the application of scientific principles to the administration of justice. It acquaints the participants with the role of the forensic science disciplines in the legal system as well as the education and training required for the career in each discipline. All high school and college age students are welcome to attend.

Chair:
Julie A. Howe, MBA
Saint Louis University
St. Louis, MO

Co-Chair:
Marilyn T. Miller, EdD
VA Commonwealth University
Richmond, VA

Faculty:
Anthropology:
Elizabeth A. Murray, PhD
College of Mount St. Joseph
Cincinnati, OH

Criminalistics:
Ken Williams, MS, JD
New Jersey State Police
Little Falls, NJ

Digital & Multimedia Sciences:
Richard W. Vorder Bruegge, PhD
Federal Bureau of Investigation
Quantico, VA

Engineering Sciences:
Roy Crawford, BSME
RR Crawford Engineering, Inc.
Whitesburg, KY

General:
Claire E. Shepard, MS
La Delta Community College
Monroe, LA

Jurisprudence:
Christine Funk, JD
Washington, DC

Chair Emeritus:
James L. Frost, MD
Morgantown, WV

Odontology:
Adam J. Freeman, DDS
Westport, CT

Pathology/Biology:
J.C. Upshaw Downs, MD
GBI Medical Examiner’s Office
Savannah, GA

Psychiatry & Behavioral Science:
Christopher R. Thompson, MD
Los Angeles, CA

Questioned Documents:
Paula Henderson, BAA
IRS-CI National Forensic Lab
Chicago, IL

Toxicology:
Philip M. Kemp, PhD
Bioaeronautical Research Laboratory
Oklahoma City, OK
INTERDISCIPLINARY SYMPOSIUM

Pre-Registration Required — $50

Past Presidents Future Science: Hot Leads in Contemporary Forensic Research

Tuesday, February 1, 2015 — 8:30 a.m. - 12:15 p.m.  X  CE Hours

Chair:
Elizabeth A. Murray, PhD
College of Mount St Joseph
Dept of Biology
Cincinnati, OH

Co-Chair:
Jeri D. Ropero-Miller, PhD
RTI International
Research Triangle Park, NC

Faculty:
Robert E. Barsley, DDS, JD
Louisiana State University School of Dentistry
Oral Health Resources
New Orleans, LA

Barry K. Logan, PhD
NMS Labs/CFSRE
Willow Grove, PA

Thomas L. Bohan, PhD, JD
MTC Forensics
Peaks Island, ME

Daniel A. Martell, PhD
Park Dietz & Associates
Newport Beach, CA

Edmund R. Donoghue, MD
Georgia Bureau of Investigation
Savannah, GA

Richard Rosner, MD
New York, NY

Zeno J. Geradts, PhD
Netherlands Forensic Institute
Ministry of Justice
Den Haag, NETHERLANDS

John L. Sang, MS
Glen Head, NY

John E. Gerns, MFS
Enkenbach-Alsenborn, GERMANY

Ronald L. Singer, MS
Tarrant County MEO
Fort Worth, TX

Carol Henderson, JD
Stetson University
College of Law
Gulfport, FL

Douglas H. Ubelaker, PhD
Smithsonian Institution
Dept of Anthropology
Washington, DC

Description
The Past Presidents of the American Academy of Forensic Sciences (AAFS) represent a vast repository of forensic science knowledge, insight, and wisdom. As a group, they are unique in the world with regard to the scope of their collective influence and leadership vision in the forensic sciences. This year’s Interdisciplinary Symposium will harness the energy from this eminent group of forensic scientists and focus it on the Academy’s future. The Interdisciplinary Symposium will showcase Past Presidents and other representatives from each of the Academy’s 11 sections. The speakers will share their vision for the future of forensic science in their respective disciplines, emphasizing hot leads from the laboratory, theoretical advances, and emerging technologies. The goal of this program is to envision where the forensic sciences will be a decade from now, the impact of these emerging advances on the law, and our place in it. This historic endeavor will be of significant interest to all Academy members and will provide a unique forum for learning from each other about the future of forensic science. Current AAFS President, Daniel A. Martell, PhD, will provide the Interdisciplinary Symposium’s introductory remarks.
Anthropology
Douglas H. Ubelaker, PhD — AAFS Past President (2011-12): Dr. Ubelaker believes that predicting the future of any discipline can prove challenging, yet current trends and developments provide useful clues. Within forensic anthropology, Dr. Ubelaker sees these trends related to issues of certification, accreditation, the nature of case applications, employment, training, enhanced methodology, and new research.

Criminalistics
Ronald L. Singer, MS — AAFS Past President (2004-05): His familiar quote with regard to this topic is, “May you live in interesting times.” According to Mr. Singer, the future of criminalistics is indeed going to be interesting. Technological advances and the increased reliance on computer-driven systems and databases will reduce the time required for analytical processes, make them more specific, and even allow many procedures to be handled at the crime scene as opposed to the laboratory. Using advanced DNA technologies, we will be able to predict physical features of unknown donors; probative information will be obtained from smaller and smaller samples; computer-assisted evaluation of the surfaces of fired bullets and cartridge cases will reduce the subjectivity involved in those analyses; and database searches will become faster and more accurate. With these advances come many challenges that will also have to be addressed. In some instances, criminalists will have to shift their focus from the bench to the preparation and monitoring of protocols for methods actually applied by non-scientists. In the laboratory, quality and accountability to our clients, the public, and the judiciary will continue to dominate our processes, but with considerably more oversight from outside bodies. This will inevitably impact our ability to deliver the services expected of us. As mandatory certification and accreditation become realities, education and training demands will increase, creating financial and staffing burdens on agencies, which in many cases will be met by a regionalization of some services, and an increased cooperation between laboratories. The Past Presidents from the Criminalistics Section are confident that these changes will lead to a vibrant future for the discipline.

Digital & Multimedia Sciences
Zeno J. Geradts, PhD — AAFS Director (2010-13): The Academy’s newest section, Digital and Multimedia Sciences, is represented by Zeno J. Geradts, PhD. With regard to future expectations, Dr. Geradts, in conjunction with his section’s working group, expects developments in big data analytics as well as multimedia analytics, due to the exponentially growing size of data. The use of strong encryption in data sources as well as communication channels is expected to rise. For that reason, forensic investigation of cloud computing, local storage media, silicon chip forensics, and mobile forensics will remain important. It is expected that many devices will be increasingly connected to the Internet, such as robotic vacuum cleaners, other household appliances, as well as various medical devices; this is being increasingly described as the “internet of things.” Forensic analysis of log files and location data of these and other tools will be more important in relation to crime scene investigation.

Engineering Sciences
Thomas L. Bohan, PhD, JD — AAFS Past President (2009-10): Having presided during the first year following the release of the 2009 National Academy of Sciences Report, Strengthening Forensic Science in the United States — A Path Forward, part of his presentation will deal with the effect – or to date – the “non-effect,” of that report on forensic engineering sciences. Engineering science practitioners come from a diversity of disciplines practically as wide as that of the AAFS itself. They include “rocket scientists” (really, engineers), space physicists, medical-device designers, transportation experts, materials testers and developers, fire investigators, and nearly everything except practicing physicians and attorneys, though some engineering scientists are physicians and attorneys as well. As such, they will be intimately involved in the complex activities shaping our society in the near and, it is hoped, distant future. It will be, to an even greater extent than at present, an electronically-monitored society. This monitoring includes governmental surveillance and automotive “black boxes,” but it also includes the microprocessor-coupled systems that “observe” and control our airplanes, ventilation systems, and surgical procedures. This monitoring is data-based and it produces data; and it occasionally fails in its assigned control tasks. Planes crash, surgical suites catch on fire, and building designs incorporate dangerous flaws. In the recipe for resolving the civil and criminal disputes created by such failures, practitioners from the forensic engineering sciences comprise the most common ingredient, often exceeding in number even the litigators. Dr. Bohan’s presentation will explore this role of his colleagues and how it will be affected by forensic reform measures when they are finally applied to the forensic engineering sciences.
General
John E. Gerns, MFS — AAFS Secretary (2013-14): Diversity of the General Section will continue to play a pivotal role in the future horizons of the forensic sciences. In keeping up with the changes being driven by the National Institute of Science and Technology (NIST) Organization for Scientific Areas Committees (OSAC) and Congressional Legislative action, the General Section’s Ad hoc Long Term Planning Committee is developing a long-term strategic plan which will serve as the General Section’s “blueprint for our future.” This is critical since many of our forensic disciplines fall under several of these new guidance committees. Discussion will focus on the potential challenges that face several of our forensic disciplines in the future, along with innovations in those disciplines which will enhance the application of the forensic sciences to the investigative mission.

Jurisprudence
Carol Henderson, JD — AAFS Past President (2008-09): Law and science have long been engaged in what has been called a reluctant embrace. The vast majority of civil and criminal cases involve scientific evidence that requires forensic scientists to comply with certain admissibility rules. While the legal system has usually reacted to emerging scientific discoveries, more recently it has been proactively striving to formulate a more robust legal/scientific framework for the introduction of scientific evidence into the courtroom. Topics to be explored in this presentation include trends regarding the admissibility of forensic evidence, the role of national and international organizations in shaping policies and guidelines to strengthen the foundation and acceptance of forensic science, strides made toward requiring more rigor in methodology of various fields of forensic science, judicial recognition of accreditation and certification, and current efforts to ensure lawyers and judges have the expertise necessary to comprehend and evaluate forensic evidence.

Odontology
Robert E. Barsley, DDS, JD — AAFS Past President (2012-13): The future for the Odontology Section will include progress in four key areas in the field. First, in the identification of unknown human remains, the digitization and adoption of the electronic health record on a worldwide scale will greatly improve the capture and transferability of the biometric data underlying dental identification. In particular, the rapid adoption of digital radiographic imaging not only benefits traditional methods of dental comparison but has also impacted the second area undergoing rapid development — dental aging. This includes age at time of death for unidentified remains as well as the use of oral-facial development to determine the age of living individuals, a technique important in immigration status, employment status, and even in criminal matters in various jurisdictions. The adoption of digital imaging has also played a key role in renewed interest in dental markers for sexual dimorphism. The third field is the study of dental biometric analysis in disaster victim identification. The “richness” or “granularity” (the detail) of dental data captured and then used in the calculations that develop and rank-order antemortem and postmortem findings is an area enjoying rapid development. At the same time odontologists are working across disciplines to develop unified identification software that allows those disciplines to share and use information as needed to complete identifications. Finally, the area of dental-related patterned injury (bitemark) analysis is under intense scrutiny. In addition to at least one recently completed National Institute of Justice (NIJ) funded study, numerous ongoing and completed studies are focused on pattern comparison, tissue injury and response in living test subjects, and the area of cognitive bias. A project to provide a decision tree for analysis and comparison of human bitemarks that may be useful in suspected biter linking and/or exclusion is underway as well.

Pathology/Biology
Edmund R. Donohue, MD — AAFS Past President (2005-06): Dr. Donohue reports that, at present, the future of forensic pathology appears good. Easy gains can be accomplished by distributing currently existing radiology and computer-imaging technology to medical examiner offices. A number of situations could create difficulty for forensic pathology in the future. If the American Board of Pathology drops its current requirement for forensic pathology training, hospital residents would no longer join medical examiner offices and could not be recruited for training in forensic pathology. Maintenance of certification and re-certification examination requirements are burdensome and create the possibility that some forensic pathologists might become unemployed in the future. Standards for accreditation of medical examiner offices and autopsy standards are becoming increasingly detailed and rigorous. These standards may be obtainable with adequate staffing, infrastructure, and funding, but may become unreachable when resources are scarce. Forensic pathologists will need to be vigilant to avoid over-regulation by the federal government and other entities.
Psychiatry & Behavioral Science
Richard Rosner, MD — AAFS Past President (1996-97): Dr. Rosner states, “As one wit put it, ‘Prediction is always difficult, especially about the future.’” Given that caveat, the foreseeable future of forensic psychiatry and behavioral science will have at least two facets. On the one hand, the current effort to advance neuroscience, e.g., the United States government’s proposed $100 million Brain Research Through Advancing Innovative Neurotechnologies (BRAIN) initiative is likely to advance our knowledge of the functioning of the brain and increase the scientific basis for our specialty. On the other hand, as noted by Thomas Nagel in his recent book, “Mind and Cosmos,” certain basic problems are likely to remain either unaddressed or inadequately addressed. These problems include the nature of consciousness, the relationship of the brain to the mind, and whether or not our subjective experience of “free will” is credible. Because our concept of personal responsibility (e.g., for criminal behaviors) is inextricably linked to those three issues, the impact of the anticipated scientific advances will be limited.

Questioned Documents
John L. Sang, MS — AAFS Past Vice President (2010-11): The future of questioned documents will likely be inclined toward digital signature examination and the use of automatic forensic handwriting analysis systems by Forensic Document Examiners (FDEs) to assist in case work. Certainly, handwriting examinations will become more data oriented and the field will see more measurement data and statistical analyses being conducted. Eventually, the field may get to the point where a machine can conduct a full examination, comparison, and analysis of handwriting. However, this is still a very long way down the road. In any event, a human examiner will still have to make the final decision. Clearly, the numbers of FDEs are declining and there will be very few government positions or a cadre of highly-skilled private FDEs as in Osborn’s days. There are a good number of jurisdictions that can’t afford to have FDEs, including state, local, and law enforcement agencies. The field is barreled with an influx of individuals, generally graphologists, who claim to have been trained as FDEs via internet instruction and training. These people do not come close to meeting the minimum standards required by the AAFS Questioned Documents Section; however, they are often allowed to testify as experts. Hopefully, the courts will stem this problem but, for now, that seems unlikely. It would make sense that the courts require FDEs to be certified before they can testify. The Questioned Documents Section has worked hard over the years to have a strong certification program through the American Board of Forensic Document Examiners (ABFDE) and a good network of professional organizations. A good base of standards has been developed by the American Society for Testing and Materials (ASTM)/the Scientific Working Group for Forensic Document Examination (SWGDOC). The new National Institute of Standards and Technology (NIST) and its Law Enforcement Standards Office (OLES) will be discussed in the presentation. A high priority will be the continuing research into Terminology for Expressing Conclusions of FDEs, and it is expected that all standards will grow stronger every year moving forward. Improvements in printing technology and 3D printers will provide more challenges and opportunities for FDEs. More research will be conducted into data produced by devices used to create mechanically produced signatures. Development of different types of toners and inks will also provide more challenges. For years, Mr. Sang has believed the field will be moving closer to the digital sciences. He hopes the courts will clearly see what a significant and progressive field forensic document examination is as practiced by our members at the AAFS.

Toxicology
Barry K. Logan, PhD — AAFS Past President (2013-14): Forensic toxicology is undergoing a change of focus and direction as we convene in Orlando in 2015. The focus for the last two decades has been on pushing the limits of laboratory technology to tweak the sensitivity of Gas Chromatography/Mass Spectrometry (GC/MS) methods, the workhorse instrument in the laboratory, to the point where we have techniques with adequate sensitivity to answer most questions about whether a person ingested or was exposed to forensically significant amounts of commonly encountered toxic or intoxicating substances. Going forward, the focus is on the next generation of Liquid Chromatography/Mass Spectrometry (LC/MS) instrumentation with less demanding sample preparation requirements to achieve faster throughput and to help identify some of the more exotic compounds and their metabolites not amenable to GC/MS analysis. Identifying the optimum techniques from Time-of-Flight (TOF) to MS² and beyond in their various combinations and finding economical ways to sort and evaluate the data will be a focus in the immediate future. The second main area of change is in standards development. The Scientific Working Group for Toxicology (SWGTOX), a collaborative consensus-building approach to standards development, has achieved an incredible amount in the five years it has been in existence, and is challenging forensic toxicology labs and practitioners to refine and validate their methods and to ask more of the labs in improving quality and in estimating error and uncertainty in quantitative measurement. As SWGTOX transitions to a subcommittee of the Forensic Science Standards Board (FSSB), it
has produced a solid legacy on which to build a strong future. Combined, these two major initiatives will force a harder focus on what the results mean and what they tell us about the likelihood of an adverse effect or life-threatening condition. Drug interactions, pharmacogenomic differences in drug metabolism, the influence of tolerance in interpretation, and other factors will all have to be addressed in a more systematic way in interpretive toxicology. The Toxicology Section of the AAFS is working to equip today’s and tomorrow’s forensic toxicologists to answer these questions.

The AAFS Interdisciplinary Symposium for 2015 will be one of the highlights of the Academy meetings in Orlando. Attendees will hear from preeminent visionaries in their respective fields. The collection of speakers, the great majority of whom are Past Presidents of the American Academy of Forensic Sciences, represent a diverse and interdisciplinary view of the direction forensics will take in the years to come. These experts are not only familiar with the past in their fields, but are also looking forward to the future.

Program

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>8:30 a.m.  - 8:35 a.m.</td>
<td>Opening Remarks</td>
<td>Daniel A. Martell, PhD</td>
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<tr>
<td>8:35 a.m.  - 8:50 a.m.</td>
<td>Jurisprudence</td>
<td>Carol Henderson, JD</td>
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<td>8:50 a.m.  - 9:05 a.m.</td>
<td>Psychiatry &amp; Behavioral Science</td>
<td>Richard Rosner, MD</td>
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<td>9:05 a.m.  - 9:20 a.m.</td>
<td>Pathology/Biology</td>
<td>Edmund R. Donoghue, MD</td>
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<td>9:20 a.m.  - 9:35 a.m.</td>
<td>Anthropology</td>
<td>Douglas H. Ubelaker, PhD</td>
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<td>9:35 a.m.  - 9:50 a.m.</td>
<td>Criminalistics</td>
<td>Ronald L. Singer, MS</td>
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<tr>
<td>9:50 a.m.  - 10:05 a.m.</td>
<td>Toxicology</td>
<td>Barry K. Logan, PhD</td>
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<tr>
<td>10:05 a.m. - 10:15 p.m.</td>
<td>Question and Answer</td>
<td>Daniel A. Martell, PhD; Edmund R. Donoghue, MD; Carol Henderson, JD; Barry K. Logan, PhD; Richard Rosner, MD; Ronald L. Singer, MS; Douglas H. Ubelaker, PhD</td>
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<td>10:15 a.m. - 10:45 a.m.</td>
<td>Break</td>
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<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>Odontology</td>
<td>Robert E. Barsley, DDS, JD</td>
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<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>Engineering Sciences</td>
<td>Thomas L. Bohan, PhD, JD</td>
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Pre-Registration Required — $50

Past Presidents Future Science: Hot Leads in Contemporary Forensic Research (continued)

Program cont.

11:15 a.m. - 11:30 a.m. Questioned Documents  
*John L. Sang, MS*

11:30 a.m. - 11:45 a.m. General  
*John E. Gerns, MFS*

11:45 a.m. - 12:00 p.m. Digital & Multimedia Sciences  
*Zeno J. Geradts, PhD*

12:00 p.m. - 12:10 p.m. Question and Answer  
*Daniel A. Martell, PhD; Robert E. Barsley, DDS, JD; Thomas L. Bohan, PhD, JD; Zeno J. Geradts, PhD; John E. Gerns, MFS; John L. Sang, MS*

12:10 p.m. - 12:15 p.m. Closing Remarks  
*Daniel A. Martell, PhD*
Each year at the American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting, the Young Forensic Scientists Forum (YFSF) provides a program for a group of students and forensic scientists with less than five years of professional experience. The session allows participants to interact with their peers as well as with the professional speakers and to build professional relationships that foster growth and mentorship opportunities. Special session topics provide attendees with a broad overview of the many opportunities in the field of forensic science. In addition to the special session, YFSF offers two opportunities for young forensic scientists to present their own work or research: the YFSF Bring Your Own Posters (BYOP) session and the YFSF Bring Your Own Slides (BYOS) session. The Forensic Sciences Foundation (FSF) Emerging Forensic Scientist Award winner is also invited to present her award-winning paper during this special session.

For the AAFS 67th Annual Scientific Meeting in Orlando, FL, the YFSF Special Session will present YFSF 20th Anniversary: The Past, the Present, and Our Future. The special session will be held on Tuesday, February 17, 2015, and will include speakers from many of the AAFS sections who will discuss personal experiences and improvements within the field of forensic science. Through the presentation, attendees will learn how various forensic fields are changing and what opportunities are available to undergraduate students, graduate students, and young professionals. Speakers will discuss educational and professional requirements in their respective fields as well as skills needed throughout the forensic science community. Lunch is provided to both attendees and speakers who are registered for the special session.

Following the Tuesday session, the YFSF BYOP session will be presented in the evening, giving young professionals the opportunity to showcase current cases and research in a poster format.
The annual YFSF BYOS Session takes place the evening of Wednesday, February 18, and will include presentations from students and new forensic scientists. The program will conclude Thursday, February 19, 2015, with the annual YFSF Breakfast Session which includes a resume review panel.

Program:

8:30 a.m. - 8:40 a.m.  2015 YFSF Introductions and Welcome  
*Lara Frame-Newell, MA*

8:40 a.m. - 9:00 a.m.  The Role of Young Forensic Scientists in the AAFS  
*Daniel A. Martell, PhD*

9:00 a.m. - 9:15 a.m.  Transformation of the Forensic Sciences  
*Victor W. Weedn, MD, JD*
Program cont.

9:15 a.m. - 9:45 a.m. Membership in the AAFS
Cheryl D. Hunter

9:45 a.m. - 10:15 a.m. Questioned Documents: The Fairest of Them All
Jane A. Lewis, MFS

10:15 a.m. - 10:30 a.m. Break

10:30 a.m. - 11:00 a.m. By Their Teeth They Shall Be Known
John P. Kenney, DDS, MS

11:00 a.m. - 11:30 a.m. Change Is Inevitable: Forensic Toxicology 1995-2015 (and Beyond)
Ruth E. Winecker, PhD

11:30 a.m. - 12:00 p.m. Me? A Special Agent? An Exciting Career Option for Forensic Scientists
Elizabeth Richards, PhD

12:00 p.m. - 1:30 p.m. Lunch

1:30 p.m. - 2:00 p.m. Professionalism in Forensic Science
Anjali A. Ranadive, JD

2:00 p.m. - 2:30 p.m. Dear Me: A Letter to My Baby Lawyer Self
Christine Funk, JD

2:30 p.m. - 3:00 p.m. The Cloud Is the Crime Scene
Mark Pollitt, PhD

3:00 p.m. - 3:15 p.m. Break

3:15 p.m. - 3:45 p.m. Mentorship: My Experiences Mentoring My Son and Others
Barry A.J. Fisher, MS, MBA

3:30 p.m. - 3:45 p.m. What’s the Difference Between Try and Triumph?
Ken Williams, MS, JD

3:45 p.m. - 4:15 p.m. Implementing Change in a Multidisciplinary Forensic Science World
John Nixon, MBA

4:15 p.m. - 4:30 p.m. Temporal Characterization of Ossification of the Crania in Australian Subadults: New Standards for Age Estimation Using Computed Tomography
Nicolene Lottering, BS

4:30 p.m. - 4:50 p.m. Recreating a Career in Forensic Science
Diane B. Fraser, MSFS

4:50 p.m. - 5:00 p.m. Closing Remarks
Christine G. Hayes, BS; Jessica Smith, BS

7:00 p.m. - 8:30 p.m. YFSF Poster Session
Wednesday

February 18 — 6:00 p.m. – 7:00 p.m.

YFSF Bring Your Own Slides

Thursday

February 19 — 7:00 a.m. – 10:00 a.m.

Young Forensic Scientists Forum Annual Breakfast

Getting There: Unique Professional Journeys in Forensic Science

As in past years, the Breakfast Session will maintain focus on developing professional skills for the next generation of forensic professionals. Representatives from educational institutions, professional organizations, and various careers will present on career skills including networking and career preparation. The topics discussed will assist emerging scientists as they determine what careers they would like to have. After the presentations, attendees will have the opportunity to receive résumé assistance and feedback from AAFS members already established in their careers.

The Special Session provides students, young professionals, and AAFS members with a way to foster career-long relationships. The main goal of the YFSF is to encourage mentorship between young and veteran forensic scientists. Participants are encouraged to apply for membership in the AAFS and are given guidance on the many opportunities available to aid in career enrichment.

7:00 a.m. - 7:30 a.m. YFSF Annual Breakfast
7:30 a.m. - 7:45 a.m. Welcome and Speaker Introduction
Alicja K. Lanfear, PhD; Tiffany B. Saul, MSc
7:45 a.m. - 8:15 a.m. How to Blossom Where You Are Planted and Figure Out How You’ll Grow
Christine Funk, JD
8:15 a.m. - 8:45 a.m. Succeeding in Forensic Science: Not an Oxymoron
Ann H. Ross, PhD
8:45 a.m. - 9:00 a.m. Panel Discussion: Q&A With Speakers and Résumé Panelists
9:00 a.m. - 10:00 a.m. Résumé Review and Feedback
Pre-Registration Not Required — Open to all Meeting Attendees

Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission

Tuesday

February 17, 2015 — 8:30 a.m. - 3:30 p.m.

Educational Objectives: Upon completion of this session, the participant should be able to understand the process of accreditation through the AAFS FEPAC mechanism and be able to participate in the process as a reviewer of academic programs. Attendees from academic programs will also learn about the process of accreditation from different perspectives.

Chair: Matthew R. Wood, MS
Ocean County Sheriff’s Dept
Forensic Science Laboratory
Toms River, NJ

Commissioner: Melissa A. Smrz, MS
American Society of Crime Laboratory Directors
Laboratory Accreditation Board
Alexandria, VA

Commissioner: Suzanne Bell, PhD
West Virginia University Dept of Chemistry
Morgantown, WV

Program Description: This session has been developed to assist academic institutions offering undergraduate and graduate degree programs in forensic science and forensic digital evidence to prepare for the accreditation process through the Forensic Science Education Programs Commission (FEPAC). The session will also assist future on-site evaluators (academic and practitioners) to prepare for on-site evaluations of academic programs. Successful completion of this one-day session will qualify participants for consideration to serve as on-site evaluators for FEPAC in the future (please note that participants must still meet other FEPAC requirements such as membership in the AAFS and designation as either a practitioner or academician).

The FEPAC is a standing committee of the AAFS with a membership that includes five educators, five forensic laboratory directors, and a public member as voting members. The mission of the FEPAC is to maintain and enhance the quality of forensic science education through a formal evaluation and recognition of college level academic programs. The primary function of the committee is to develop and maintain standards and administer an accreditation program that recognizes and distinguishes high quality undergraduate and graduate forensic science programs. Forty academic programs have successfully completed the accreditation process since 2003. Additional information on FEPAC can be found on the FEPAC website: http://fepac-edu.org.

Program:

8:30 a.m. - 9:30 a.m.  Introduction and Welcoming Remarks
Module 1: Accreditation, Mission, and History of FEPAC
Matthew R. Wood, MS

9:30 a.m. - 10:00 a.m.  Module 2: Overview of FEPAC Process, Policies, and Procedures
Melissa A. Smrz, MS

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:00 p.m.  Module 3: Review of Standards
Suzanne Bell, PhD
Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission (continued)

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<tr>
<th>Time</th>
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<tr>
<td>11:00 a.m.</td>
<td>Module 4: Scenarios and Evaluation</td>
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<tr>
<td>11:45 a.m.</td>
<td>Lunch</td>
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<td>1:00 p.m.</td>
<td>Module 5: Graduate Standards</td>
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<td>1:45 p.m.</td>
<td>Module 6: The On-Site Visit</td>
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<td>2:15 p.m.</td>
<td>Break</td>
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<tr>
<td>2:30 p.m.</td>
<td>Module 7: Scenario and Evaluation</td>
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<tr>
<td>3:00 p.m.</td>
<td>Questions and Answers</td>
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Pre-Registration Not Required — Open to all Meeting Attendees
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Forensic Sciences — Keep It Simple, Stupid!

Tuesday, February 17 — 8:00 p.m. - 9:30 p.m.

<table>
<thead>
<tr>
<th>Speakers</th>
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<tr>
<td>J.C. Upshaw Downs, MD</td>
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<tr>
<td>GBI Medical Examiner’s Office</td>
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<td>Savannah, GA</td>
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<td>Carla M. Noziglia, MS</td>
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<td>ICITAP</td>
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<td>Aiken, SC</td>
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Educational Objective: After attending this presentation, attendees will learn a simple paradigm to balance four key elements of practice in order to enhance opportunities for a long-term, successful career.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing a memorable framework to balance the critical areas of education, analysis, reporting/testimony, and ethics.

The career of the forensic science practitioner is arduous. Reflection and simplification may prove beneficial in coping with the myriad stresses inherent in the profession. The requisite training is intellectually challenging, often continuing into graduate and postgraduate studies. Continuing education is essential to stay current with the latest scientific developments and techniques, in addition to exploring potential new research in order to develop improved procedures and protocols. Application of the knowledge base in investigating a particular event is a daily exercise for the forensic caseworker, regardless of discipline.

The awesome responsibility imposed by applying precise analytical methodology while maintaining scientific objectivity which must be balanced with the reality of the significance of the results can prove burdensome. Eventually, the results of the forensic analysis will yield a scientific report which is often presented in court. Sharing the vast wealth of background information with a lay jury by means of unbiased reports and courtroom testimony is an oft underappreciated skill. The convergence of presenting detailed science with conveyance of the essential data while maintaining neutrality requires both sophistication and simplification in communication. Finally, given the gravity of the consequences of the adversarial system and the inherent nature of the casework, the forensic scientist experiences profound ethical challenges during the course of a career. Those successful in the long term are careful to pay heed to the needs of the individual human spirit. Diversions and moderation can help balance the ethics of personal and professional life in order to maximize the individual’s potential for overall success.

Thus, the four cornerstones of knowledge, investigation, sharing, and spirit are the bedrock upon which a successful career in the forensic sciences can be structured. Utilizing an entertaining multimedia format, the panel will discuss each of these four elements in order to demonstrate how each might be integrated into a successful whole. These lessons will no doubt prove beneficial to attendees at all points on the career path, from novice to retiree. Ultimately, the foundation will remind all that a successful mantra for forensics is easy to remember – keep it simple, stupid!
Pre-Registration Not Required — Open to all Meeting Attendees

Wednesday

February 18, 2015 — 8:00 a.m. - 8:45 a.m.

The Academy Cup

A Quiz Game to Test Your Knowledge of AAFS

The AAFS 2015 Academy Cup will take place on Wednesday, February 18, 2015, before the plenary session. Teams meet at 8:00 a.m., an hour before the Plenary Session, for instructions and team strategy. The game will start at 8:15 a.m. and consists of multiple-choice and true or false questions projected onto a screen to test each section’s knowledge.

Each section’s team is comprised of up to 11 members, including Past President/Past Vice President, Board Member and/or Officer, Chair, Secretary, YFSF volunteers and the section leader’s other strategic choices. The YFSF volunteers will be assigned to sections on Tuesday at the YFSF session. Teams will have fifteen minutes to answer questions. Once all sections have their answers turned in, the answers to the questions will be presented.

The winning team will be announced and trophy presented at the AAFS Annual Business Meeting at 4:15 p.m. Teams should be present at the Annual Business Meeting to find out who won and available at the conclusion to have a group photo taken.

If you just want to test your knowledge, the room is open for everyone. Feel free to join your section behind your flag to help cheer them on!

Points of Contact:

Pre-Plenary Chair: Laura L. Liptai, PhD
Pre-Plenary Co-Chair: Distinguished Fellow Carla M. Noziglia, MS
Pre-Plenary Co-Chair: Past President Carol Henderson, JD
Program Co-Chair: Andrew M. Baker, MD
Plenary Co-Chair: Matthew R. Wood, MS
YFSF & Teams: Lara Frame-Newell, MA

Academy Cup Team Leaders:

Anthropology: Phoebe R. Stubblefield, PhD
Criminalistics: Lawrence Quarino, PhD
Digital & Multimedia Sciences: Rhesa G. Gilliland, MS
Engineering Sciences: John Nixon, MBA
General: Claire E. Shepard, MS
Jurisprudence: Christine Funk, JD
Odontology: Iain A. Pretty, DDS, PhD
Pathology/Biology: J.C. Upshaw Downs, MD
Psychiatry & Behavioral Science: Christopher R. Thompson, MD
Questioned Documents: Thomas W. Vastrick, BS
Toxicology: Dwain C. Fuller, BS

Program:

8:00 a.m. - 8:15 a.m. Instructions, Introductions of Team Leaders and Teams Strategize
8:15 a.m. - 8:30 a.m. PowerPoint® Questions and Team Answer Sheet Turned In
8:30 a.m. - 8:45 a.m. PowerPoint® Answers
Pre-Registration Not Required — Open to all Meeting Attendees

Wednesday

February 18 — 9:00 a.m. - 11:30 a.m. 1.75 CE Hours

Welcoming Remarks

Human Factors in Forensic Science: Why Cognitive Bias Can Lead to Flawed Expert Opinions and Testimony, How Its Influence Can Be Minimized, and What Challenges Testifying Experts and Judges Can Expect to Face

Daniel A. Martell, PhD
President
American Academy of Forensic Sciences
Park Dietz & Associates
Newport Beach, CA

Plenary Session Chair:
Roderick T. Kennedy, JD
New Mexico Court of Appeals
Albuquerque, NM

Plenary Session Co-Chair:
Matthew R. Wood, MS
Ocean County Sheriff’s Department
Forensic Science Laboratory
Toms River, NJ

Moderator & Speaker:
Andrew Sulner, MSFS, JD
Forensic Document Examinations, LLC
New York, NY
Overview

The past year marked the formation of the Organization of Scientific Area Committees (OSAC) as part of an initiative by the National Institute of Science and Technology (NIST) and the Department of Justice (DOJ) to strengthen forensic science in the United States. One of its three Resource Committees is the Human Factors Committee, which provides guidance throughout the OSAC on the influence of systems design on human performance and on ways to minimize cognitive and confirmation bias and mitigate errors in complex tasks.

The Plenary Session will present a distinguished panel of speakers that will discuss the manner in which cognitive bias can adversely impact evaluations of evidence and decision making in all forensic disciplines. Understanding the various sources of bias and learning how to limit or minimize their influence is essential for improving the reliability and accuracy of decisions made by forensic experts and for avoiding miscarriages of criminal and civil justice. All forensic scientists and laboratory directors can benefit from developing a better understanding and keen awareness of the potential for bias and the types of internal procedures and protocols that can be
implemented to minimize the impact of bias in forensic investigations and casework. In our adversarial judicial system, testifying experts, trial lawyers, and judges need this knowledge in order to effectively fulfill their respective roles and ethical obligations.

The continued education of our community is essential to foster the growth and integrity of forensic science. This Plenary Session will provide a forum for examining how cognitive bias can improperly sway the perceptual and cognitive judgments of forensic examiners, how such cognitive contamination can produce faulty conclusions even absent malicious intent, and why our community should embrace the concept of bias control in pursuing the interests of justice.

Program:

9:00 a.m. - 9:05 a.m. Welcoming Remarks  
_AAFS President Daniel A. Martell, PhD_

9:05 a.m. - 9:30 a.m. Cognitive and Motivational Causes of Investigative Error  
_Dan Simon, SJD_

9:30 a.m. - 9:55 a.m. Are Good Intentions and Willpower Sufficient to Overcome Contextual Bias? A Look at the Psychological Literature  
_William C. Thompson, PhD_

9:55 a.m. - 10:20 a.m. Confessions in Context: Why Confessions Corrupt Forensic Perceptions and Judgments  
_Saul Kassin, PhD_

10:20 a.m. - 10:25 a.m. Why Forensic Scientists Should Embrace the Concept of Bias Control: A Practitioner’s Perspective  
_Andrew Sulner, MSFS, JD_

10:25 a.m. - 10:45 a.m. Cognitive Bias in Forensic Pathology  
_Barry C. Scheck, JD_

10:45 a.m. - 11:00 a.m. Panel Discussion  
_AAFS President Daniel A. Martell, PhD_
Monday

#1  Wildland Fires of Electrical Origin — Deaths and Litigation

February 16 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

Helmut G. Brosz, PEng, BASc
Brosz Forensic Services
Markham, ON  CANADA

Educational Objectives:  After attending this presentation, attendees will better understand some of the causes of wildland fires resulting in deaths, injury, and litigation, resulting in a more effective understanding of forensic methods and issues.

Impact on the Forensic Science Community:  This presentation will impact the forensic science community by providing information to the legal, insurance, electrical utility, and forensic engineering industry as well as authorities having jurisdiction that become involved in wildfire losses, claims, litigation, and investigation.  At the outset, the cause of a wildfire is often not known.  Investigation after the “smoke” has cleared requires specialized knowledge and methodology in order to determine the origin, cause, and reason for the initiation of a wildfire.  Spoliation issues will also be discussed.

California, Australia, and Florida share a high number of wildfires caused by or involving power lines, lightning, animals, carelessness, vehicles, arson, etc., and other unusual causes.  Wildfires have caused thousands of deaths (directly and indirectly), property destruction of dwellings and infrastructure, and business interruption.  The millions of dollars of loss invariably result in civil litigation if a chance of monetary recovery is likely.  Criminal litigation is also likely if the proper circumstances exist.

Issues such as sag and tension of power lines before and after a fire and line-to-line and line to ground voltages need to be considered. Clearances from vegetation (trees) and clearances to ground at various temperatures often require not only measurements but catenary calculations and elongation characteristics of copper, aluminum, and Aluminum-Conductor Steel-Reinforced (ACSR) wires. Sometimes energized power lines sag into vegetation due to the heat from a fire below and then make contact with vegetation. The track left by the arcing event may sometimes be interpreted as causal as opposed to resulting.

The importance of accurate surveys of sections of overhead distribution lines along with the ground below are often necessary to determine if the overhead line was built according to applicable codes and standards.

Animals and birds sometimes cause short circuits on lines and at hardware on poles.  Animals may fall to the ground while on fire and initiate a wildfire at the base of the pole, giving the appearance of the fire having been caused by utility apparatus.  The origin will be at a pole, the cause will be the bird/animal, but the reason will be known only to this critter.  Responsibility is sometimes focused on the electric utility and not on the animal.  Laboratory simulation tests in a high-voltage lab as well as field tests with portable equipment can be of assistance at these times.  Lightning discharges on electrical lines, poles, and hardware can also start wildfires.

The Topanga Canyon wildfire of 1993 near Malibu, Los Angeles County, CA burned 19,000 acres in a span of a few hours at a high speed, burned 739 structures, homes, and cars, killed three people, and provides an example of a criminal arson investigation gone awry.

The Cavendale fire of 1996 burnt about 3,000 acres of mostly vineyards in Sonoma and Napa Valley, California as well as a few structures.  Did a tree grow into a line or did a line sag into a tree?  Did a Steller’s Jay bird commit animal electrical suicide?  Did California wines develop a smoky taste that year?  More than $30,000,000 was at stake in the ensuing litigation.

Wildfires are here to stay and death, destruction, litigation, and the rebirth of forests and fields continues.
Tuesday

#2 Mental Health Support to Law Enforcement: Practical Issues

February 17 — 7:00 a.m. - 8:30 a.m.

R. Gregg Dwyer, MD, EdD  
Community & Public Safety Psychiatry Division  
Medical University of South Carolina  
Charleston, SC

Eric Skidmore, DMin  
South Carolina Law Enforcement Assistance Program  
Columbia, SC

Andy Gruler, MSW  
Greer, SC

Educational Objective: The goal of this presentation is to provide a description of mental health services for law enforcement personnel with guidance on the establishment and maintenance of such services.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing guidance on developing and implementing a mental health program for personnel exposed to exceptionally stressful work environments and content.

Although police work has always had the risk of negatively impacting the mental health of line law enforcement forensic personnel through their exposure to violent crime scenes, officer-involved shootings, line of duty deaths, and other critical events, services have been limited. There are multiple combinations and settings in which mental health services can be provided to the law enforcement community. They vary from answering informal questions to formal consulting contracts for service with the mental health professional embedded in an agency for real-time access by law enforcement personnel. Services include pre-employment screening, fitness-for-duty evaluations, training on stress prevention and management, post-critical incident services, and responding real-time to crime scenes, Special Weapons and Tactics (SWAT) operations, hostage and barricaded person negotiations, threatened suicide in progress, officer-involved shootings, and other traumas. This seminar provides an overview of the types of services available, the necessary and suggested credentials to be an effective consultant, a how-to guide for finding and recruiting such a consultant, and potential conflicts with dual-agency relationships, all presented using actual examples from the field.
Tuesday

#3 Bank Robbery on Chicago’s South Side — 75 Years After John Dillinger

February 17 — 7:00 a.m. - 8:30 a.m.

Educational Objectives: The goal of this presentation is to introduce attendees to the current difficulties and challenges of investigating violent crime from both an investigator’s and a forensic science perspective.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by creating a better understanding of the crime of bank robbery and the evidentiary issues associated with the crime.

The crime of bank robbery has been the subject of many Hollywood movies, books, and news stories in the United States since the mid-1800s. These events have sometimes been portrayed as glamorous and at other times as the violent and desperate actions of someone with nothing to lose. The closure rate on bank robbery cases varies over time based on numerous variables such as the skill and experience of the robber, the statement of the victims and witnesses, and the location of responding local police officers. However, the quality and amount of evidence available to investigators continues to climb.

As various examination methods of biological evidence get more sensitive, training is provided to bank employees on the importance of preparing the bank counters and other surfaces for the day. It is incumbent on the bank employees to ensure surfaces used by customers and potential bank robbers is cleaned each and every day to help ensure biological material from previous customers and employees is removed prior to a robbery.

This presentation consists of a review of several bank robberies on the south side of Chicago to include unarmed note jobs to high-profile takeover-style robberies with multiple subjects with an emphasis on the forensic evidence used in the investigation or lack thereof. Included is the unique experience of an investigating agent on bank robbery investigations who also undertook the responsibility on several occasions to process the evidence involved with the crime scene, the subsequent arrests, and any related search warrants.

Three cases will be presented that illustrate the difficulties and challenges of investigating the crime of bank robbery. The first case is a copy of the movie The Town in which the robbers, a man and a women, dressed as nuns and robbed the bank at gunpoint. The second case is a robbery in which the robber conducted reconnaissance from inside the bank as well as surveillance of the bank prior to the robbery. The subject attempted to use the Crime Scene Investigation (CSI) effect leading up to trial and during sentencing to argue that absence of evidence is, in fact, evidence of absence proving that he was kidnapped and placed under duress which resulted in him robbing the bank. A range of video, forensic, digital, and circumstantial evidence was used to convict the subject. The third case involved two individuals who traveled to the Chicago area to rob a bank and planned to flee back to Oklahoma. After preparing for the robbery by obtaining disguises, a rental vehicle, weapons, and a scanner, they robbed a bank, only to be followed by a local tow truck driver who called the police, directing responding officers to the getaway vehicle. The chase was recorded by police dashboard cameras while one of the subjects called 911 to demand they be allowed to escape, ultimately threatening and firing a bullet into another vehicle before crashing into a police car.
Wednesday

#4 Crime Scene Reconstruction of Nine United States Air Force Active Duty Members Killed in Kabul, Afghanistan

February 18 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Chad W. Hutchins, MFS
Waverly, GA

Educational Objectives: After attending this presentation, attendees will understand some principles of crime scene reconstruction, such as how to gain explicit knowledge from a series of events or event segments that surround the commission of a crime, the application of deductive and inductive reasoning, the integration and interpretation of physical evidence, strict adherence to the scientific method, and the interrelationship of all the components into a final product.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating how crime scene reconstruction can enhance an investigation with critical interdisciplinary reliance. Crime scene processing techniques, criminalistics, digital sciences, pathology, serology/toxicology, firearms analysis, and other disciplines of forensic science all contribute vital information in this example of a practical application of crime scene reconstruction.

On April 27, 2011, eight United States Air Force (USAF) active duty members and one civilian were murdered by a trusted Afghan pilot being mentored by the USAF members in a surprising blitz-style attack. The incident took place in the two-story Afghan Air Corps Headquarters building on the Afghan Air Force’s side of the Kabul International Airport, Kabul, Afghanistan. Just before a routine weekly meeting, seven USAF active duty members and one civilian were gunned down in the Afghan Air Command and Control Center (ACCC); the meeting was to take place just minutes later in an adjoining conference room. The ninth USAF active duty member was murdered just outside the building after he and another active duty USAF member exited the conference room and engaged the gunman throughout two separate hallways of the headquarters building. The gunman was wounded at some point during the gun fight, which left clues to his actions before he walked to the second floor of the building where he sustained two fatal gunshot wounds to the chest.

Four different multi-national response and law enforcement teams processed the scene before the Air Force Office of Special Investigations (AFOSI) was allowed unrestricted access five days later. By this time, furniture had been moved from its original position and cleaned, all visible projectiles and cartridge casings had been collected in a manner which made it impossible to determine exactly where they had come from, blood on the floors and walls had been cleaned and painted over, glass containing bullet holes had been replaced, and the decedent’s clothes had been incinerated.

Many questions were immediately asked. Was there more than one gunman? If not, how could one person murder this many military members, most of whom were armed, without being stopped? Crime scene reconstruction was the only way to take this extremely complex case with fragmented physical evidence from a severely contaminated crime scene and produce answers.

Statements from several Afghan witnesses present in the ACCC were used to aid in the reconstruction; however, available physical evidence and autopsy findings were crucial. The rest of the reconstruction, spanning a building of approximately 14,000 square feet, relied heavily upon interpreting physical evidence, deductive and inductive reasoning, and applying the scientific method to come to conclusions.

Many times a crime scene reconstruction is accomplished to answer a specific question or sequence specific events involved in a crime. In this case, the reconstruction was performed to simply identify the major event segments and place them in as much of a sequence as possible in an effort to answer the question, “What happened?” This enabled the conclusion of only one gunman and provided clues as to how one person could carry out a murder spree against military personnel who were carrying weapons.
BREAKFAST SEMINARS

Pre-Registration Required — $50

Thursday

#5 The Roso Case: An Unpublished Trial Regarding Hermaphroditism Verified Through the Expertise and Written Advice of Leading Physicians in 19th-Century Florence

February 19 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Annarita Franzia, PhD
Florence, ITALY

Vincenzo Lusa, JD
Rome, ITALY

Educational Objectives: After attending this presentation, attendees will understand the techniques and methods used at what, in 19th-century Europe, was considered a famous trial: the case of Maria Rosa Fantini (1764-1839), which centered on a series of reports regarding the very delicate issue at the center of a case of “doubtful sex” and who was later shown to be a hermaphrodite. This trial remained buried in the Archiepiscopal Archives of Florence and has only recently been brought to light.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by illustrating the importance of introducing, at trial, the technical expertise and opinions of such famous Italian doctors of the time as Vincenzo Chiarugi (1759-1820), the father of Italian psychiatry. Attendees will also better understand how the methods of the Positivist School, which had shaped such forensic scientists as the criminal anthropologist Cesare Lombroso (1835-1909), were able to demonstrate a person’s true sexual identity with psychological developments that emerged in court, thus revolutionizing the perception each individual has of themself. During the presentation, the previously unpublished court records and reports of this particular case will be presented along with the findings of the proceedings.

The research conducted at the Fiesole (Italy) Diocesan Historical Archives has permitted a reconstruction of Fantini’s life. On July 15, 1805, an initial application was filed at the Court of the Episcopal Curia of Fiesole by the husband, Dionisio, to dissolve his marriage to Maria Rosa, whose poor genital conformation invalidated the marriage. Subsequently, on February 13, 1818, Dionisio, convinced of his marriage’s illegality, brought action for an annulment before the Episcopal Court of Florence where, at the behest of the lawyer Simeone Döthel, a second report, entrusted this time to Vincenzo Chiarugi, was filed. The examination showed a surprisingly large enterocele in the right groin area and, at the uppermost part of the pubic arch, a glans imperforate, resembling a foreskin circumcision, and a very well-built frenulum that forced the glans toward the bottom. On the basis of anatomical data, Chiarugi concluded that Maria Rosa was a male. The clinical history found in the Historical Archives of the University of Florence, shows that Maria Rosa was admitted to the women’s ward, where the anatomist Giuseppe Chiarugi, son of Vincenzo Chiarugi, identified her as being a male. She was then transported to the men’s infirmary (bed number 598) and given the masculinized name of Roso. On her deathbed, she declared her regret that, “In the midst of the confusion of the opposite sex, I am and was a woman and I am surprised at how these gentlemen want me to die here among men.” Maria Rosa died at 11:00 a.m. on the morning of April 16, 1839, in the men’s ward of the Santa Maria Nuova Hospital. The autopsy, performed by Stanislao Petri, confirmed the previous forensic report. As evidenced by copies of the death certificate, found at the Florence State Archives and the Archiepiscopal Historical Archives of Florence, the deceased was recorded under the name of Roso Fantini, an unmarried male.

The case of Maria Rosa “Roso” Fantini provides valuable material for scientific research and an unpublished look at Italian positivism regarding the nascent “sexual question.” The extraordinary nature of this now-forgotten case was mentioned by Caesar Taruffi (1821-1902), professor of pathology at the University of Bologna and a leading expert on hermaphroditism in the period in the work Ermafroditismo ed agenosoma (1902). In keeping with the dictates of scientific writing at the time, Vincenzo Chiarugi’s forensic report was published in the form of letter (Sopra una supposta specie di ermafroditismo, 1819) highlighting indirect evidence of Maria Rosa’s sexual behavior. Having been raised and having lived as a female, she believed that she had been born and lived as a woman. Trials in that period demonstrated that, in instances of “ambiguity,” it was possible to divert “nature” from its course; as in the case of Maria Rosa, psychologically changing a male into a female. On the subject of hermaphroditism, Cesare Lombroso, from the School of Criminal Anthropology, also strongly supported the influential role of education in the formation of sexual identities.
PRE-REGISTRATION REQUIRED — $50

Thursday

#6 RECENT CHANGES IN PHARMACEUTICAL INDUSTRY OPERATIONS: BOON OR BANE?

February 19 — 7:00 a.m. - 8:30 a.m.

.75 CE Hour

Abraham T. Philip, MD
Regional MEO
Newark, NJ

Educational Objective: After attending this presentation, attendees will have a greater understanding of what is happening in manufacturing, marketing, and distribution of medications in the United States.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by increasing awareness of the pharmaceutical industry on several levels. The recent developments in the pharmaceutical industry operations have adverse effects at the micro, macro, and global level. At the micro level, attendees will gain insights about the medications they or their loved ones have been taking. At the community level, and specifically related to medicolegal work, is the potential harm these medications have on the communities we in forensic science serve. At the national level, these developments also undermine the United States health care system and perpetuate fraud on the nation.

There have been at least three widely acclaimed books regarding several of the issues that will be discussed in this presentation. The clarion call regarding negative impact of the trade practices of the pharmaceutical industry was given by Marcia Angell, MD, Past Editor of the New England Journal of Medicine in her book, The Truth About the Drug Companies: How They Deceive Us and What to Do About It published in 2004. Ms. Angell comes on as a strong critic of the pharmaceutical industry, the Food and Drug Administration (FDA), and the United States health care system. In addition, she lambastes the academic medical establishment about their biases and conflicts of interest while promoting pharmaceutical products.

More recently, a broadside against the same industry was published from across the great pond (Atlantic Ocean) by Ben Goldacre, a physician and academic, in his book, Bad Pharma published in 2012. Echoing several of the same themes, Dr. Goldacre also highlights the role of the Cochrane Collaboration to promote proper research and publication of data by the industry. The latest book publication in this series is David Healy’s (a psychiatrist from, the United Kingdom), book Pharmageddon, which was published last year.

On another front, there has been a move to outsource pharmaceutical production to compounding pharmacies. This move, in a largely under-regulated and poorly supervised industry, had led to issues regarding increased mortality and morbidity due to medications. One recent example was the outbreak of fungal meningitis due to contamination of steroid injections for epidural infusion. The medication, manufactured at a plant in Framingham, MA, was distributed to 75 medical facilities in 23 states. Doses from contaminated lots were administered to approximately 14,000 patients, and the outbreak of fungal meningitis started in October 2012, claiming 48 lives, while 720 others were treated for persistent infection. Attempts were made to introduce legislation to rectify the loopholes in the good manufacturing practices, with the passage of the Drug Quality and Security Act of 2013. However, it has turned out to be only lip service to improvement, and on July 23, 2014, the FDA warned of a recall of drugs compounded by two pharmacies in Texas.

The latest twist to this saga is the production and distribution of drugs by internet pharmacies through what is known as the “Dark Net” or the “Silk Road.” These changes have raised concerns regarding illegal or unethical practices in the form of dispatching outdated, substituted, and counterfeit medications, potential lack of confidentiality, improper packaging, inability to check for drug interactions, etc. This current change in the process of obtaining medications from online sources puts additional stress on law enforcement, primarily the United States customs, but also everyone charged with medicolegal death investigation. On July 17, the Federal Express Corporation (FedEx) was indicted for allegedly shipping prescription drugs from illegal online pharmacies to dealers and addicts, according to documents filed in federal court. According to Ms. Melinda Haag, the United States attorney dealing with the case, “The indictment highlights the importance of holding corporations that knowingly enable illegal activity responsible for their role in aiding criminal behavior.”
Friday

#7  The Businessman, the Wife, the Aunt, and the Children: Multiple Murders by Drowning

February 20 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

Chris Milroy, MD, LLB
Ottawa Hospital
Ottawa, ON  CANADA

Educational Objectives: After attending this presentation, attendees will understand “honor killings” and the role they play in certain societies, the pathology of drowning, and the importance of a complete death investigation system.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an understanding of the importance of a full autopsy in drowning cases and the role that cultural values play in supplying a motive for some homicides.

On June 30, 2009, near the City of Kingston, Ontario, a car was found in the Rideau canal, a 126-mile (202 km) canal that runs between Ottawa and Kingston, Ontario. When a diver located the car, there were four bodies present. The bodies were recovered and a Nissan® Sentra® car removed from the water. On the same day, a Canadian businessman of Afghani origin reported that three of his daughters, aged 19, 17, and 13 years of age, were missing along with their 50-year-old aunt. The father reported that they had been on holiday at Niagara Falls, were returning to Montreal, and stopped at a motel for the night. The 19-year-old daughter, who had apparently been learning to drive, was reported to have taken the car keys to the Nissan® Sentra® stating she needed something, and had then driven off with her aunt and sisters.

When the bodies were recovered, the police initially assumed the deaths were an accident. Postmortem examinations were conducted and the deaths were recorded as drownings. Toxicological analysis of the four victims was negative.

However, soon after the deaths, Kingston police became concerned that the deaths were not accidental. The oldest son of the businessman had reported that he had been involved in an accident with his car in Montreal on the morning the bodies had been found and had reported the crash to the Montreal police, though no other car was involved. However, glass found at the scene in Kingston indicated that the glass was from the Lexus® (which had a defect in the headlight) the son was driving in Montreal.

A very comprehensive criminal investigation which involved multiple jurisdictions was conducted. The aunt turned out to be the first wife of the businessman, who was in a polygamous marriage with his second wife, the mother of all seven children in the family. On July 22, 2009, the businessman, his wife, and their oldest son were arrested and subsequently charged with first-degree murder of all four victims.

Inquires by the police indicated that the four victims in the car had been intentionally killed. The evidence did not support the four victims dying in the car, as they appeared to have been killed elsewhere. Covert surveillance had indicated that the father, mother, and son had been involved in killing their children/siblings. The son subsequently admitted that he had been at the scene when the Nissan® entered the water, but said it was an accident.

The motive presented by the prosecution was that these deaths were “honor” killings based upon the three teenage girls having become too “westernized.” The offences have been called “homicides” by the press.

The businessman, his wife, and son were tried for first degree homicide. The trial lasted over two months and involved witnesses giving evidence in four languages including Dari, the Persian dialect spoken by the defendants. Both parents gave evidence in their defense, but not the son. The jury returned guilty verdicts against all three defendants.

This presentation will discuss how the complex investigation developed, the pathology of the victims, and the concept of “honor killings.”
**BREAKEFAST SEMINARS**

*Pre-Registration Required — $50*

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**Friday**

#8  **Thomas Krauss Bitemark Breakfast: From Frye to Daubert — A Change in Legal Standard**

February 20 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

**Jeffrey L. Ashton, JD**  
Office of the State Attorney  
Orlando, FL

**Educational Objectives:** The goal of this presentation is to discuss the challenges facing prosecutors in presenting scientific evidence, generally and specifically those faced when presenting new or novel scientific advances. In particular, discussion will encompass the implication of the change in legal standards from *Frye* to *Daubert* as they apply, using the State of Florida as an example.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing a more complete understanding of the prosecution of Casey Anthony.

Born on October 3, 1957, in St. Petersburg, Florida, Jeff Ashton studied law at the University of Florida School of Law and became an Orlando prosecutor. In 1987, he was the first lawyer to earn a conviction by introducing DNA evidence into a case. Decades later, he became the head prosecutor of the sensational 2011 Casey Anthony trial. Ashton has written a book about his experiences, *Imperfect Justice: Prosecuting Casey Anthony*, and was sworn in as a state attorney in 2013.

Jeff Ashton worked in a number of divisions that were part of the state attorney's office before winning his first murder conviction in a 1983 trial. While serving as assistant state attorney, in 1987, Ashton took on a groundbreaking role: He began working as prosecutor on the trial of a Florida serial rapist, and during the trial, he introduced DNA-based evidence. The case resulted in the first conviction using DNA testing, with such evidence being used regularly thereafter, in cases throughout the country. Three years later, Ashton established his office's homicide division.

For a time in 2002, Ashton was appointed as head of the juvenile division of the state attorney's office, but missed the courtroom and decided to return to prosecuting. Over his decades-long career, he has taken hundreds of cases to trial.

In June 2011, Ashton worked as prosecutor in the highly sensational Casey Anthony trial. Anthony, a young woman from Florida, was accused of murdering her 2-year-old daughter, Caylee Anthony, whose remains were found near the Anthony home. The case received a huge amount of media attention focusing on the Anthony family's back-story, with the prosecution taking the stance that Anthony was guilty of murder, and the defense countering that Caylee's death was an accident that was subsequently covered up.

On July 5, 2011, the jury found Casey Anthony not guilty of first-degree murder, aggravated manslaughter or aggravated child abuse charges. Anthony was found guilty of charges related to providing the police with false information, and was placed on parole after receiving a fine and credit for time served. Ashton was stunned by the decision.

As he'd intended, Ashton retired from working as prosecutor after the trial, and worked part-time at a law firm. In November 2011, Ashton released the best-selling book *Imperfect Justice: Prosecuting Casey Anthony*, published by William Morrow. In his book, the prosecutor deconstructs the case, including his thoughts on Anthony defense attorney Jose Baez and the use of the death penalty.

In 2012, Ashton ran for the state attorney seat in the Floridian counties of Orange and Osceola, against his former supervisor, Lawson Lamar. Ashton won the election and, in early January 2013, was sworn in as a state attorney. That same month, the Lifetime® Network aired *Prosecuting Casey Anthony*, a TV movie based on Ashton's book, starring Rob Lowe as the prosecutor.
LUNCHEON SEMINARS

Pre-Registration Required — $55

Thursday

#1  Fetal Kidnapping by Cesarean Section

February 19 — 12:00 p.m. - 1:30 p.m.  1.0 CE Hour

Ann Wolbert Burgess, DNSc
Boston College
West Newton, MA

Michael Welner, MD
New York, NY

Educational Objectives: After attending this presentation, attendees will be aware of the common conflicts and personality qualities of those who commit kidnapping by cesarean section. Attendees will also be informed about the modus operandi of this most peculiar crime. The data will be integrated into recommendations for forensic assessment and public safety.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by presenting findings from 15 completed and five attempted cases of fetal kidnapping by cesarean section and by providing insights about perpetrators who commit this unthinkable crime so that prevention can play a role in any future research.

The National Center for Missing and Exploited Children (NCMEC), concerned with the abduction of children (birth through six months) by non-family members, has been studying such cases since 1983, focusing on the abductors and violence, and has been providing guidelines for healthcare professionals on prevention of and response to infant abductions. While educational programs for healthcare agencies and hospitals proved successful in deterring abductions from institutions, the number of abductions from non-agency settings and the numbers of infant abductions from non-hospital settings increased. A study of 247 infant abductions over three decades revealed birth mother injury as an important change between the years of 1983-1992 and 1993-2006. The occurrence of fetal abduction by cutting open the mother’s abdomen, though rare, has increased. This raises questions as to the motivation for the act, the dynamics in the planning, the lethal intent to secure a baby, the legal outcomes, and the lessons to be learned for prevention.

Fetal abduction involves behaviors that are not well understood or researched. In the first study of its kind, media-reported, non-family cesarean section cases were reviewed. This presentation reports the findings on the 15 completed and five attempted non-family member cases reported to the NCMEC. Data were obtained from court documents as well as NCMEC records. A number of demographic variables were investigated: perpetrator gender (all female), state the crime was committed in (13 states), year the crimes took place (with the number doubling since 2000), race (varied, with race of the victim mother being consistent with the offender’s), and age (most abductors targeted a younger mother, with the offender’s age ranging from 19 to 40 years of age). Furthermore, all perpetrators (except one) were in a relationship, more than half already had children, and nine offenders were (or believed they were) infertile.

Several themes were identified across the 15 cases. All abductors lied that they were pregnant, although the motivation for the lie varied. Abductors sought out medical information on childbirth and cesarean sections to prepare for the crime. A critical component of pregnancy simulation is targeting either a “known” mother and gaining her trust or frequenting places pregnant women attended to select a “random” victim mother. For all perpetrators, the murder plan had long been in their mind, and they usually prepared cesarean “kits” in advance; however, the location of the crime varied. In all but one case, the victim mother died, and only ten of the 15 babies survived. This research investigated the psychological defenses employed in each case, and the topics of lying, pregnancy simulation, and capacity to commit murder for personal gain of a newborn while legally sane were critical to this study. Perhaps most important was the underlying issue of fertility as central to the identity of the perpetrator.

This presentation reviews the findings of this study and its implications for public safety and for forensic assessment. Examples illustrating the expression of these peculiar personalities, how they relate to others in their lives antecedent to and following the crime, and lessons from how victims are ensnared — and escape — are also presented.
Friday

#2  The Dating Game Killer: Rodney Alcala’s 40-Year Dance With Death

February 20 — 12:00 p.m. - 1:30 p.m.  
1.0 CE Hour

Martha Bashford, JD  
New York County District Attorney’s Office  
New York, NY

Melissa Mourges, JD  
New York County District Attorney’s Office  
New York, NY

Jonathan Hayes, MD  
OCME  
New York, NY

Mark E. Safarik, MS  
Forensic Behavioral Svs Int’l  
Fredericksburg, VA

Educational Objective: After attending this presentation, attendees will learn how investigators linked the murders of two women in New York City in the 1970s with a string of California homicides committed by “Dating Game Killer” Rodney Alcala, and how he came to justice after 40 years.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by illustrating investigative, forensic, and prosecutorial techniques that turn cold cases into court cases.

What would you think if you picked Bachelor #1 on the Dating Game and he turned out to be a serial killer? That’s what happened in 1978 to a contestant who chose Rodney Alcala as her date. Luckily, that woman’s “Spidey-sense” went off after they met backstage and she refused to go out with him.

Alcala had killed four women by the time he was a Dating Game contestant in 1978; at least three more victims followed. A decade earlier, Alcala had abducted an 8-year-old California schoolgirl and drove her to his house. A witness called police, who broke down the front door as Alcala jumped out a back window. Tali Shapiro was naked and near death; Alcala had choked her by putting a barbell across her throat.

He escaped to New York City and enrolled in New York University’s film school under the name John Berger. Then, in 1971, 23-year-old stewardess Cornelia Crilley was found with bitemarks on her breast, raped, strangled, and posed inside her Upper East Side bedroom, but the case remained unsolved. Later that summer, while “Berger” worked at a music camp in New Hampshire, campers recognized his picture on a Federal Bureau of Investigation (FBI) wanted poster. He was extradited for the Shapiro assault and served four years in jail.

He returned to New York, where aspiring actress Ellen Hover made a date with him, writing “John Berger” on her calendar. She disappeared from her Manhattan apartment in July, 1977. Her badly decomposed body was found buried in a Westchester park near the Hudson River almost a year later.

After Hover’s disappearance, Alcala returned to California. Within a span of 20 months, he killed five women: a teenage health aide, a 27-year-old nurse, a 32-year-old secretary, a 21-year-old data processor, and a 12-year-old on her way to ballet class. Each was raped, strangled, and posed; some were beaten, some had bitemarks.

One victim survived; Alcala had picked up a 15-year-old hitchhiker, drove into the mountains, where he sodomized, raped, and choked her. He let her live when she promised to be his girlfriend.

DNA eventually linked the California attacks. Alcala was convicted and sentenced to death in 2010. Detectives uncovered hundreds of photos of young women and boys in his storage locker in Seattle and searched for new victims. Meanwhile, the Crilley and Hover cases remained unsolved. Links to Alcala were made; his fingerprint was on an envelope found beneath Crilley’s body and bitemarks on her breast were consistent with Alcala. In addition, the “Berger” notation on Hover’s calendar was linked to his alias.
The Manhattan District Attorney’s Cold Case Unit and the New York City Police Department (NYPD) worked to pull together a legally sufficient case to charge Alcala in those deaths. Retired FBI senior profiler Mark Safarik, who worked the original California cases, and the Office of Chief Medical Examiner (OCME) forensic pathologist Jonathan Hayes scoured autopsy reports and crime scene photos for similarities. Investigators found friends and neighbors of the victims, Alcala’s old girlfriends, eyewitnesses, vehicle registrations, toll receipts, decades-old serology reports, and medical and military records. Alcala’s surviving victim relived the horrible details of her ordeal, and the victims’ families cried again as they relived the last time they saw their sisters and learned about their deaths. Alcala was indicted for killing Crilley and Hover. He pleaded guilty to their murders in 2013 and received the maximum sentence. Headlines at the time read, “Judge Weeps as Serial Killer Sentenced.” Alcala was returned to San Quentin where he still lives on Death Row.
#1 Mass Fatality Incidents: An Integrated Approach

Monday, February 16, 2015  8:30 a.m. - 12:00 p.m.  3.25 CE Hours

Educational Objectives: After attending this presentation, attendees will understand how the Armed Forces Medical Examiner System integrates various areas of forensic science in mass fatality incidents. In addition, attendees will have an understanding of how emerging technologies are leveraged in each of the areas.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating an effective and proven approach to integrating various fields of forensic science and emerging technologies in mass fatality incidents.

Chair:  Christian Crowder, PhD  
Armed Forces Medical Examiner System  
Dover AFB, DE

Co-Chair:  Todd M. Howell, MFS  
Magnolia, DE

Faculty:

Edward Mazuchowski II, MD, PhD  
Dover AFB, DE

Edward A. Reedy, PhD, MD  
Armed Forces Medical Examiner System  
Dover AFB, DE

Program Description: This presentation will provide an overview of how various areas of forensic science are integrated in mass fatality incidents. These areas include law enforcement, mortuary affairs, medicolegal death investigation, forensic photography, fingerprint specialists, forensic odontologists, DNA specialists, forensic radiology, forensic anthropology, forensic pathology, and forensic toxicology. In addition, the emerging technologies of each field will be highlighted.

Program:

8:30 a.m. - 8:45 a.m.  AFMES and Mass Fatality Incident Overview  
*Ladd Tremaine*

8:45 a.m. - 10:00 a.m.  Scene Operations  
*Christian Crowder, PhD; Todd M. Howell, MFS*

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 10:45 a.m.  Scientific Identification  
*Edward A. Reedy, PhD, MD*

10:45 a.m. - 12:00 p.m.  Autopsy Operations and Disposition  
*Sean A. Swiatkowski, DO; Edward Mazuchowski II, MD, PhD*

Targeted Audience: Anthropology, Criminalistics, General, Odontology, Pathology/Biology, Toxicology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 15 Pages
#2 The Electrophysiology of Impulsive Aggression and Criminal Responsibility

Monday, February 16, 2015  
8:30 a.m. - 12:00 p.m.  
3.0 CE Hours

**Educational Objectives:** After attending this presentation, attendees will better understand the role of an electrical abnormality in impulsive aggression and will appreciate the concomitant normalization of abnormal event-related potentials and impulsive aggressive behaviors.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by enabling attendees to explain the strengths and weaknesses of impulsive aggression, with its electrophysiological manifestation, in mental defenses against criminal charges.

**Chair:** Alan R. Felthous, MD  
Saint Louis University School of Medicine  
Forensic Psychiatry Division  
St. Louis, MO

**Co-Chair:** Stephen J. Ferrazzano II, JD  
Office of Public Defender  
Marshall, MN

**Faculty:**
- **Kelly N. Gable, PharmD**  
Southern Illinois University at Edwardsville  
School of Pharmacy  
Edwardsville, IL

- **Matthew S. Stanford, PhD**  
Baylor University  
Waco, TX

- **Ghazala Hayat, MD**  
Saint Louis University  
St. Louis, MO

**Program Description:** If the ability to control one’s behavior pertains to criminal responsibility, a neurophysiological correlate of impulsive aggression may be relevant. Using event-related potentials, investigators have demonstrated that the abnormal electrical activity of the brain in impulsive aggression normalizes as the impulsive aggressive behavior improves with certain medications. After a presentation of the science of such potentials is explained, an excerpt from a mock trial will illustrate the legal issues involved when the science of these potentials is applied to criminal responsibility.

**Program:**

- **8:30 a.m. - 8:40 a.m.**  
  Welcome and Introduction  
  *Alan R. Felthous, MD; Stephen J. Ferrazzano II, JD*

- **8:40 a.m. - 9:00 a.m.**  
  “The Electric Will”  
  *Alan R. Felthous, MD*

- **9:00 a.m. - 9:20 a.m.**  
  Neurophysiology and Pathological Significance of ERPs  
  *Ghazala Hayat, MD*

- **9:20 a.m. - 9:40 a.m.**  
  Medication Effects on ERPs  
  *Kelly N. Gable, PharmD*

- **9:40 a.m. - 10:00 a.m.**  
  ERPs and Impulsive Aggression  
  *Matthew S. Stanford, PhD*
Pre-Registration Required — $100 w/registration; $125 workshop only

#2 The Electrophysiology of Impulsive Aggression and Criminal Responsibility (continued)

Program cont.

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<tr>
<th>Time</th>
<th>Event Description</th>
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<tr>
<td>10:00 a.m. - 10:15 a.m.</td>
<td>Break</td>
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</tbody>
</table>
| 10:15 a.m. - 10:35 a.m. | The ALI and EED Defenses  
*Stephen J. Ferrazzano II, JD* |
| 10:35 a.m. - 11:30 a.m. | Mock Direct and Cross Examination of Expert Giving Testimony on ERPs and Impulsive Aggression in Defendant Tried for Murder  
*Stephen J. Ferrazzano II, JD; Matthew S. Stanford, PhD* |
| 11:30 a.m. - 12:00 p.m. | Verdict and Review                                                               |

Targeted Audience: General, Jurisprudence, Psychiatry & Behavioral Science

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 50 Pages
#3 Classification of Typewritten Documents

Monday, February 16, 2015  8:30 a.m. - 4:30 p.m.  6.25 CE Hours

**Educational Objective:** After attending this presentation, participants should have an understanding of the typewriter typestyle classification systems and understand their uses and limitations.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing an update of typewriter typestyle classification systems.

**Chair:**
Karen J. Nobles, BA
Forensic Document Examinations
Pensacola, FL

**Co-Chair:**
Peter V. Tytell, BA
Forensic Research, LLC
New York, NY

**Program Description:** Typewriting and typewritten documents have shown an increase in popularity the last few years and an increase in typestyle examinations is inevitable. This presentation will enhance and refresh attendees’ skills in the examination and classification of typewritten documents. Attendees will learn basic to advanced techniques. The morning session will cover the basic principles for classifying typewriter type styles and the afternoon session will cover classification techniques using the WinType® classification program, the Haas® Atlas, and the Interpol typewriter cards. Practical exercises will provide a hands-on experience. A copy of the WinType® program will be provided.

**Program:**

8:30 a.m. - 8:40 a.m.  Opening Remarks  
*Peter V. Tytell, BA*

8:40 a.m. - 10:00 a.m.  History of Typestyle Classification Systems  
*Karen J. Nobles, BA; Peter V. Tytell, BA*

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 12:00 p.m.  Principles and Mechanics of Typestyle Classification  
*Karen J. Nobles, BA; Peter V. Tytell, BA*

12:00 p.m. - 1:00 p.m.  Lunch

1:00 p.m. - 2:30 p.m.  Use of the WinType® Program and the Interpol System With Practical Problems  
*Karen J. Nobles, BA; Peter V. Tytell, BA*

2:30 p.m. - 2:45 p.m.  Break

2:45 p.m. - 4:15 p.m.  Continuation of Practical Problems  
*Karen J. Nobles, BA; Peter V. Tytell, BA*

4:15 p.m. - 4:30 p.m.  Closing Remarks  
*Peter V. Tytell, BA*
Pre-Registration Required — $200 w/registration; $250 workshop only
Registration is limited to AAFS members until January 15, 2015.

#3 Classification of Typewritten Documents (continued)

Targeted Audience: Questioned Documents

Knowledge Level Required: Basic (little or no knowledge of subject presented)

Expected Handout Length: 105 Pages

Restricted Audience Size: 25
#4 Obtaining Successful DNA Profiles From Challenging Samples

**Monday, February 16, 2015**  
8:30 a.m. - 4:45 p.m.  
6.75 CE Hours

**Educational Objectives:** After attending this presentation, attendees will understand how to overcome challenges associated with trace and/or degraded forensic DNA samples by using novel DNA extraction, quantification, profiling, and analysis technologies to provide probative results from even the most compromised DNA samples.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by serving as a forum for disseminating the latest information regarding the analysis of challenging forensic DNA samples. The panel discussion will include information on new DNA testing systems and methodologies for cases where traditional methods do not produce results.

**Program Description:** This workshop will present current advances for analyzing challenging forensic samples. It will include improvements in extraction efficiency, optimizing laboratory processing methods, improved methods in quantification of DNA, setting thresholds for capillary electrophoresis, trace DNA methods, novel marker systems, and result interpretation issues for challenging samples, such as mixtures, probabilities, and allele dropout.

**Program:**

- **8:30 a.m. - 8:35 a.m.**  
  **Introduction**  
  *Sudhir K. Sinha, PhD*

- **8:35 a.m. - 9:25 a.m.**  
  **The Development and Application of Trace DNA Methods to Household Dust and Touch Evidence**  
  *John Ballantyne, PhD*

- **9:25 a.m. - 10:15 a.m.**  
  **Optimized Processing Methods Developed and Utilized for the Identification of Highly Challenged Human Remains**  
  *Timothy P. McMahon, PhD*

**Chair:**  
*Sudhir K. Sinha, PhD*  
InnoGenomics Technologies, LLC  
New Orleans, LA

**Co-Chair:**  
*Bruce R. McCord, PhD*  
Florida International University  
Dept of Chemistry  
University Park  
Miami, FL

**Faculty:**  
*John Ballantyne, PhD*  
University of Central Florida  
Dept of Chemistry  
Orlando, FL

*Timothy P. McMahon, PhD*  
Dover Airforce Base  
Dover, DE

*Mark A. Desire, MS, JD*  
Dept of Forensic Biology  
New York, NY

*Craig O. O’Connor, PhD*  
NYC Office of Chief Medical Examiner  
New York, NY

*Arthur J. Eisenberg, PhD*  
UNT Health Science Center at Fort Worth  
Fort Worth, TX

*Mark R. Wilson, PhD*  
Western Carolina University  
Dept of Chemistry/Physics  
Forensic Science Program  
Cullowhee, NC

**Pre-Registration Required — $200 w/registration; $250 workshop only**
#4 Obtaining Successful DNA Profiles From Challenging Samples (continued)

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:15 a.m.</td>
<td>Break</td>
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</tbody>
</table>
| 10:30 a.m. | Development of New Technologies for DNA Analysis of Challenging Forensic Samples  
              *Sudhir K. Sinha, PhD*                                                   |
| 11:15 a.m. | Analysis of Highly Degraded Missing Persons Samples                       
              *Arthur J. Eisenberg, PhD*                                             |
| 12:00 p.m. | Lunch                                                                   |
| 1:00 p.m.  | Improvements in DNA Extraction Efficiency From Challenging Samples Such as  
              Hair and Bone                                                           
              *Mark R. Wilson, PhD*                                                   |
| 1:50 p.m.  | How to Set Analytical Thresholds in the Face of New Instrumentation and Improved  
              STR Kits                                                                
              *Bruce R. McCord, PhD*                                                  |
| 2:40 p.m.  | Forensic Statistics at the NYC OCME — Dealing With Complex DNA Mixtures   
              *Craig O. O’Connor, PhD*                                               |
| 3:30 p.m.  | Break                                                                   |
| 3:45 p.m.  | World Trade Center Disaster Samples 14 Years Later                        
              *Mark A. Desire, MS, JD*                                                |
| 4:35 p.m.  | Questions and Answers                                                    |

**Targeted Audience:** Anthropology, Criminalistics, General, Odontology, Pathology/Biology

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 30 Pages
#5  Ancestry Estimation in the 21st Century

**Educational Objectives:** After attending this presentation, attendees will: (1) understand methodological and theoretical aspects of ancestry estimation in light of the modern understanding of human biological variation and classification statistics; (2) comprehend the complex population groups within the United States and the best methods and terminology to use when providing an ancestry estimate; (3) recognize the best methods to use for non-metric and metric ancestry estimation; and, (4) foster an understanding of the role played by the cultural profile in medical examiners’ offices and the role of the forensic pathologists in ancestry estimation.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing up-to-date methodologies and modern theoretical considerations in ancestry estimation using traditional and novel approaches. Additionally, attendees will be provided with new approaches and solutions to new concerns when confronted with the current population demographics of the United States.

**Chair:**
Kate Spradley, PhD  
Texas State University  
Dept of Anthropology  
San Marcos, TX

**Co-Chair:**
Joseph T. Hefner, PhD  
Michigan State University  
Dept of Anthropology  
East Lansing, MI

**Faculty:**
Bruce E. Anderson, PhD  
Pima County OME  
Forensic Science Center  
Tucson, AZ

Richard Jantz, PhD  
University of Tennessee  
Dept of Anthropology  
Knoxville, TN

Kathryn H. Haden-Pinneri, MD  
Harris Co Inst Forensic Sciences  
Houston, TX

Stephane D. Ousley, PhD  
Mercyhurst College  
Dept of Applied Forensic Sciences  
Erie, PA

**Program Description:** This presentation will focus on multiple aspects of ancestry estimation in the modern era and direct attention to some of the more important considerations necessary when making these estimates. Following a general introduction and a thorough overview of human biological variation and secular change, the focus of attention will be refined to illuminate aspects of ancestry estimations from different viewpoints and multiple forms of analysis. Ancestry estimates by the medical examiner rely on aspects of human biological variation related to, but different from, those used by forensic anthropologists. Understanding how each practitioner can assist each other and appreciating the separate questions answered is necessary and timely, given the changing demographics in the United States. When attempting to identify the remains of an individual from a complex population, we must understand the history of that population and how that history affects population structure. In other words, we need to “know” the population in order to estimate ancestry. Methodological approaches to the estimation of ancestry will also be addressed. These will include comprehensive discussions on metric and non-metric methods of analysis and a thorough exchange of ideas on the traditional and novel statistical methods and theories being used today. While metric and non-metric methods have traditionally dominated forensic anthropological analysis of ancestry, the cultural profile in conjunction with the biological profile, stands as a novel although very important tool for ancestry estimates, particularly in Undocumented Border Crossing (UBC) cases from the southwest where the cultural profile was developed. The cultural profile has been instrumental in the identification of UBCs from Central and South America.
#5  Ancestry Estimation in the 21st Century (continued)

Program:

8:30 a.m. - 9:00 a.m.  Introduction  
Kate Spradley, PhD; Joseph T. Hefner, PhD

9:00 a.m. - 10:00 a.m.  General Overview: Human Variation, Secular Change, Statistics, and Ancestry Estimation in the Modern Era  
Richard Jantz, PhD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:15 a.m.  Complex Populations: Variation and Secular Change  
Kate Spradley, PhD

11:15 a.m. - 12:15 p.m.  The “New Deal” of Non-Metric Traits: Morphoscopic Trait Analysis in the 21st Century  
Joseph T. Hefner, PhD

12:15 p.m. - 1:30 p.m.  Lunch

1:30 p.m. - 2:30 p.m.  Statistical Methods for Metric and Non-Metric Data  
Bruce E. Anderson, PhD

2:30 p.m. - 3:30 p.m.  The Biological and Cultural Profile  
Kathryn H. Haden-Pinneri, MD

3:30 p.m. - 3:45 p.m.  Break

3:45 p.m. - 4:45 p.m.  Ancestry in the Medical Examiner’s Office  
Stephen D. Ousley, PhD

4:45 p.m. - 5:00 p.m.  Discussion  
Kate Spradley, PhD; Joseph T. Hefner, PhD; Stephen D. Ousley, PhD; Richard Jantz, PhD; Bruce E. Anderson, PhD; Kathryn H. Haden-Pinneri, MD

Targeted Audience: Anthropology, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 200 Pages
Pre-Registration Required — $200 w/registration; $250 workshop only

#6 Practical Homicide Investigation®: Offender-Manipulated Homicide Scenes Relating to Equivocal Death and Staged Crime Scenes

Monday, February 16, 2015 8:30 a.m. - 5:00 p.m.  6.25 CE Hours

Educational Objectives: After attending this presentation, attendees will better understand of the unique dynamics of offender-manipulated homicide scenes and equivocal death investigations as well as the application of professional homicide investigation and medicolegal analysis to these events.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing and familiarizing forensic scientists and investigators with the art and science involved in the professional examination of homicides and sudden, violent death scenes which have been manipulated by the offender to mislead and thwart the investigation.

Chair: Vernon J. Geberth, MS Garnerville, NY
Co-Chair: Barbara C. Wolf, MD Leesburg, FL

Faculty: Thomas C. McAndrew, BA
Pennsylvania State Police
Orefield, PA

Program Description: This presentation will familiarize forensic scientists and investigators with the art and science involved in death investigation. Attendees will benefit from more than 100 years of combined homicide and forensic pathology experience of the three presenters. This presentation will focus on the elements of homicide investigation and medicolegal analysis and how follow-up procedures require close communication between prosecutors, criminalists, pathologists, and other forensic specialists. The workshop learning points are supported by detailed accounts of actual murder cases.

Offender-manipulated homicide scenes pose a unique problem for the first responders and investigators because these events are equivocal death investigations and, as such, are open to interpretation. Crime scene and autopsy observations may suggest more than one meaning. The facts may be purposefully vague or misleading as in the case of the “staged crime scene” or where the death is suspicious or questionable based upon what is presented to the authorities.

Such deaths may present as homicides, suicides, accidents, or natural causes and may be altered by the offender to misdirect the investigation through staging of the scene and/or posing or mutilation of the body. They are open to interpretation pending further information of the facts, the victimology, and the circumstances of the event.

This workshop will include major case presentations of high-profile equivocal death investigations in which the presenters jointly participated and concurred in the final analysis and determination of the proper classification of death. Attendees will be taken through the entire medical and investigative process from the discovery of the body, through the autopsy and forensic evaluation of evidence, to the final disposition of the case.

Program:

8:30 a.m. - 10:00 a.m.  Introduction to Practical Homicide Investigation®: The Preliminary Investigation at the Scene of Equivocal Deaths — Case Histories
Vernon J. Geberth, MS

10:00 a.m. - 10:30 a.m.  Break
#6 Practical Homicide Investigation®: Offender-Manipulated Homicide Scenes Relating to Equivocal Death and Staged Crime Scenes (continued)

Program cont.

10:30 a.m. - 12:00 p.m. Medicolegal Evaluation of Offender-Manipulated Homicides
Barbara C. Wolf, MD

12:00 p.m. - 1:15 p.m. Lunch

1:15 p.m. - 3:00 p.m. Case Histories of Offender-Manipulated Homicide Scenes
Vernon J. Geberth, MS; Thomas C. McAndrew, BA

3:00 p.m. - 3:30 p.m. Break

3:30 p.m. - 4:45 p.m. Medicolegal Evaluation of Equivocal Deaths
Vernon J. Geberth, MS; Barbara C. Wolf, MD

4:45 p.m. - 5:00 p.m. Discussion
Vernon J. Geberth, MS; Barbara C. Wolf, MD

Targeted Audience: General, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages
Educational Objectives: After attending this presentation, attendees will better understand the interfering products that can be found in fire debris analysis and how the products make identification of ignitable liquids difficult. Additionally, attendees will become familiar with: (1) different ignitable liquid classes and their chemical characteristics; (2) the effects of the extraction techniques on the recovered ignitable liquid residues; (3) the thought processes used to identify interfering products and ignitable liquids from fire debris samples; (4) the composition of various non-traditional ignitable liquids; and, (5) why different analytical procedures are needed. After this presentation, attendees will be able to return to their forensic laboratories and handle the interpretation of the most difficult fire debris samples.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by helping attendees better understand and interpret data related to the analysis of fire debris samples, which will lead to a reduction in the number of false negative conclusions and will eliminate false positive conclusions. The direct impact of this presentation on the forensic science community will be a more accurate and reliable science being practiced in crime laboratories.

Chair: Eric Stauffer, MS
Police cantonale Fribourg
Fribourg, SWITZERLAND

Co-Chair: Reta Newman, BS
Pinellas County Forensic Laboratory
Largo, FL

Faculty:
Douglas E. Byron, BS
Forensic & Scientific Testing
Lawrenceville, GA

Julia A. Dolan, MS
Bureau of ATF
Forensic Science Laboratory
Ammendale, MD

Program Description: This program will present advanced concepts pertaining to fire debris analysis. The fundamental principles from which interferences occur in fire debris samples will be explained in depth and the effects of the extraction procedures to the recovery of ignitable liquid residues will be presented in great detail. Other factors influencing the preservation and recovery of ignitable liquid residues will also be explained. The key elements to the interpretation of chromatograms of extracts from fire debris samples will be introduced and the proper cognitive process explained in great depth. A discussion of non-traditional ignitable liquids will be presented, including recommendations for analysis. Finally, exercises will be performed to put into practice the theory learned throughout the day.

Program:

8:30 a.m. - 8:45 a.m. Introduction
Eric Stauffer, MS

8:45 a.m. - 9:15 a.m. Fire Debris Samples Creation
Eric Stauffer, MS

9:15 a.m. - 10:00 a.m. Traditional Petroleum-Based Ignitable Liquids
Julia A. Dolan, MS

10:00 a.m. - 10:15 a.m. Break
#7 Challenges in Fire Debris Analysis (continued)

Program cont.

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<tbody>
<tr>
<td>10:15 a.m. - 11:15 a.m.</td>
<td>Non-Traditional Ignitable Liquids</td>
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<tr>
<td></td>
<td><em>Douglas E. Byron, BS</em></td>
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<tr>
<td>11:15 a.m. - 12:30 p.m.</td>
<td>Fire Debris Samples Interferences</td>
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<td><em>Eric Stauffer, MS; Julia A. Dolan, MS</em></td>
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<tr>
<td>12:30 p.m. - 1:45 p.m.</td>
<td>Lunch</td>
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<tr>
<td>1:45 p.m. - 3:15 p.m.</td>
<td>Extraction Effects on Ignitable Liquid Residue Recovery</td>
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<td><em>Reta Newman, BS</em></td>
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<tr>
<td>3:15 p.m. - 3:30 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>3:30 p.m. - 5:30 p.m.</td>
<td>Methodology of Interpretation</td>
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<tr>
<td></td>
<td><em>Eric Stauffer, MS; Reta Newman, BS; Julia A. Dolan, MS; Douglas E. Byron, BS</em></td>
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Targeted Audience: Criminalistics

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 100 Pages

Restricted Audience Size: 48
#8  From Fire Dynamics to Legal Dynamics:  Shifted Science and the Criminal Justice System’s Response

Monday, February 16, 2015  
8:30 a.m. - 5:30 p.m.  
6.75 CE Hours

Educational Objectives:  After attending this presentation, attendees will grasp the changes that have inundated the fire investigation profession and, to a larger extent, the criminal justice system in which wrongful convictions are sadly a part of the process.  Attendees will develop an appreciation of a systematic approach to the prevention of wrongful convictions, much like the National Transportation Safety Board (NTSB) focuses on the causes of train wrecks and plane crashes, not with the idea of blaming someone, but of preventing the next disaster.

Impact on the Forensic Science Community:  This presentation will impact the forensic science community by raising awareness of new science, new standards, and new methods of review on the criminal justice system’s handling of fire litigation.

Chair:  
John J. Lentini, BA  
Scientific Fire Analysis, LLC  
Islamorada, FL

Co-Chair:  
Mark E. Goodson, PE  
Denton, TX

Faculty:  
Steven W. Carman, MS  
Carman & Associates Fire Investigation, Inc  
Grass Valley, CA

Terry-Dawn Hewitt, LLM  
McKenna Hewitt  
Denver, CO

James M. Doyle, LLM  
Bassil, Klovee & Budreau  
Boston, MA

Program Description:  This presentation will explore the changes that have swept through the fire investigation profession in the last few years, both in terms of our understanding of how fires behave and how the courts have come to view fire-related expert testimony.

Program:

8:30 a.m. - 8:45 a.m.  
Introduction

John J. Lentini, BA

8:45 a.m. - 10:15 a.m.  
Changes in the Understanding of Fire Behavior and Accuracy of Origin Determinations

Steven W. Carman, MS

10:15 a.m. - 10:30 a.m.  
Break

10:30 a.m. - 11:45 a.m.  
A Perfect Storm Brewing for Fire Investigators in Court

Terry-Dawn Hewitt, LLM

11:45 a.m. - 1:15 p.m.  
Lunch

1:15 p.m. - 2:45 p.m.  
Cases Where Shifted Science as “New Evidence” Played a Role

John J. Lentini, BA

2:45 p.m. - 3:00 p.m.  
Break
Pre-Registration Required — $200 w/registration; $250 workshop only

#8 From Fire Dynamics to Legal Dynamics: Shifted Science and the Criminal Justice System’s Response (continued)

Program cont.

3:00 p.m. - 4:15 p.m.  Sentinel Events Initiative: Methodology for Examining Wrongful Convictions and “Near Misses”  
James M. Doyle, LLM

4:15 p.m. - 5:30 p.m.  Texas Scientific Review Board: Exploring the Integrity of Arson Convictions  
Mark E. Goodson, PE

Targeted Audience: Criminalistics, Engineering Sciences, Jurisprudence

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 400 Pages
#9  Forensic Anthropology and Cold Case Investigations: Breaking the Ice

Monday, February 16, 2015  8:30 a.m. - 5:30 p.m.  7.5 CE Hours

Educational Objective: The goal of this presentation is to provide training specific to long-term unsolved cases in the areas of forensic anthropology and archaeology, imaging, human identification, and geochemical profiling. This workshop is relevant for anyone in homicide investigations, forensic science, or forensic anthropology working in the United States or internationally.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an in-depth exploration of a range of new tools and an integrated approach to investigating previously unsolved or long-term cases. The integration of scientific experts into homicide investigations provides an array of evidence and investigative leads that help increase case solvability.

Program Description: Homicide cases in which the victims are unknown are the hardest to solve and make up a significant portion of the unidentified persons pool in the United States. Increasingly, anthropologists are also used by law enforcement to assist at the crime scene with human identification, imaging, and media outreach. The purpose of this presentation is to provide training specific to long-term unsolved cases and is relevant for anyone in homicide, forensic science, or forensic anthropology. Experts from anthropology, geochemistry, and homicide investigations will discuss current trends for methods and case analysis in several key areas: (1) Cold Case Analysis: Opening Pandora’s Box; (2) Witness Interviews and Issues of Episodic Memory; (3) Crime Scene and Field Methods: From Excavation to Remote Sensing; (4) Forensic Anthropology Methods of Ancestry and Imaging; (5) Geochemical Methods to Track Mobility, Birth Origins, and Diet; (6) Public Outreach: Using Media as a Tool to Bring in Leads; (7) Case Management: When the Years Pass By; and, (8) Trends and Opportunities in Education and Training in Cold Cases.

Program:

8:30 a.m. - 8:50 a.m.  Introduction to Forensic Anthropology & Cold Case Investigations

Erin H. Kimmerle, PhD
WORKSHOPS

Pre-Registration Required — $200 w/registration; $250 workshop only

#9  Forensic Anthropology and Cold Case Investigations: Breaking the Ice (continued)

Program cont.

8:50 a.m. - 9:35 a.m.  Cold Case Analysis:  Opening Pandora’s Box  
James Holmes, BA

9:35 a.m. - 9:50 a.m.  Break

9:50 a.m. - 10:40 a.m.  Death Investigations at the Florida Industrial School for Boys  
Erin H. Kimmerle, PhD; Gregory E. Berg, PhD; Greg Thomas, BA

10:40 a.m. - 12:40 p.m.  Case Studies: Innovative Methods and Case Solvability  
Greg Thomas, BA; Darren Norris, BA

12:40 p.m. - 1:40 p.m.  Lunch

1:40 p.m. - 2:30 p.m.  Field Methods: Search & Recovery  
Gregory E. Berg, PhD

2:30 p.m. - 3:20 p.m.  Issues in Human Identification  
Jose P. Baraybar, MSc

3:20 p.m. - 3:35 p.m.  Break

3:35 p.m. - 4:25 p.m.  Geochemical Profiling for Mobility, Birth Origins, and Diet  
George D. Kamenov, PhD; Liotta N. Dowdy, BS

4:25 p.m. - 4:45 p.m.  Facial Reconstructions and Forensic Imaging  
Erin H. Kimmerle, PhD

4:45 p.m. - 5:30 p.m.  Forensic Interviewing and Episodic Memory  
Greg Thomas, BA

Targeted Audience:  Anthropology, Criminalistics, General, Pathology/Biology

Knowledge Level Required:  Intermediate (some knowledge)

Expected Handout Length:  200 Pages
**#10 NamUs: The Results of Forensic Collaboration**

**Monday, February 16, 2015**
8:30 a.m. - 5:30 p.m.  
7.25 CE Hours

**Educational Objectives:** After attending this presentation, attendees will: (1) learn about the history of the National Missing and Unidentified Persons System (NamUs) and the various NamUs user types, the manner in which NamUs receives and validates its case data; (2) understand how the NamUs databases interact to produce potential matches; (3) realize how case exclusions are made; and, (4) grasp the importance of the “public user” to the success of NamUs.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by increasing the attendees’ ability to enter cases into the NamUs system and participate in the investigation or tracing of missing and unidentified persons cases nationally. The skills and knowledge obtained in this presentation will assist attendees in communicating with other forensic investigators on cases of missing and unidentified persons regardless of jurisdictional boundaries.

**Chair:**  
*Steven C. Clark, PhD*
Big Rapids, MI

**Co-Chair:**  
*Joanna L. Collins, MFS*
San Antonio, TX

**Faculty:**

*Bruce E. Anderson, PhD*  
Pima County OME  
Forensic Science Center  
Tucson, AZ

*Ronald Brunelli*  
Syracuse, NY

*Emily A. Craig, PhD*  
Georgetown, KY

*John E. Filippi, DDS*  
Valley, NE

*Brenda Galarza, BA*  
National Center for Missing and Exploited Children  
Alexandria, VA

*Randy L. Hanzlick, MD*  
The Fulton County Medical Examiner’s Center  
Atlanta, GA

*Charles M. Heurich, MFS*  
National Institute of Justice  
Dept of Justice, OJP  
Washington, DC

*Jeffrey M. Jentzen, MD*  
University of Michigan  
Ann Arbor, MI

*Elizabeth A. Murray, PhD*  
College of Mount St. Joseph  
Dept of Biology  
Cincinnati, OH

*B.J. Spamer, MFS*  
NamUs/UNT Health Science Center  
Fort Worth, TX

*Daniel J. Warren, MS*  
Fort Myers, FL

This program is presented by the Forensic Sciences Foundation, Inc.
Pre-Registration Required — $200 w/registration; $250 workshop only

#10 NamUs: The Results of Forensic Collaboration (continued)

Program Description: This presentation will educate attendees on the National Missing and Unidentified Persons System (NamUs) as an investigative tool used to identify the unidentified dead in medical examiners’ and coroners’ offices nationally.

Program:

8:30 a.m. - 8:40 a.m.  Introduction
Steven C. Clark, PhD

8:40 a.m. - 9:25 a.m.  NamUs: An Open Source Investigative Tool
Randy L. Hanzlick, MD

9:25 a.m. - 9:50 a.m.  NamUs.gov: Why the National Institute of Justice Supports NamUs
Charles M. Heurich, MFS

9:50 a.m. - 10:10 a.m.  The Public Side of NamUs
B.J. Spamer, MFS

10:10 a.m. - 10:25 a.m.  Break

10:25 a.m. - 11:00 a.m.  Chronology of a Missing Person
Daniel J. Warren, MS

11:00 a.m. - 11:35 a.m.  Chronology of a Missing Child
Brenda Galarza, BA

11:35 a.m. - 12:20 p.m.  Chronology of an Unidentified Person
Jeffrey M. Jentzen, MD

12:20 p.m. - 1:30 p.m.  Lunch

1:30 p.m. - 2:30 p.m.  NamUs and the Forensic Odontologist
John E. Filippi, DDS

2:30 p.m. - 3:15 p.m.  NamUs and the Forensic Anthropologist
Emily A. Craig, PhD

3:15 p.m. - 3:30 p.m.  Break

3:30 p.m. - 4:10 p.m.  Matches and Exclusions
Bruce E. Anderson, PhD

4:10 p.m. - 4:50 p.m.  Case Closed!
Ronald Brunelli

4:50 p.m. - 5:20 p.m.  Raising the Next Generation of NamUs Investigators
Elizabeth A. Murray, PhD

5:20 p.m. - 5:30 p.m.  Questions
Pre-Registration Required — $200 w/registration; $250 workshop only

#10 NamUs: The Results of Forensic Collaboration (continued)

Targeted Audience: Anthropology, Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Toxicology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 120 Pages
#11 RADid: Using Radiologic Technologies to Identify Unknown Decedents

**Monday, February 16, 2015**

**1:00 p.m. - 5:00 p.m.**

**3.25 CE Hours**

**Educational Objectives:** After attending this presentation, attendees will understand: (1) the role of radiography and advanced Radiologic Imaging (RADid) in the process of decedent identification; (2) techniques for performing high-quality imaging and creating 3D images and strategies to be able to use these images to make successful identifications; (3) anthropologic approaches to RADid; (4) the need for interdisciplinary collaboration; and, (5) the evolving nature of the evidence basis and standards for RADid.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by enhancing the ability of practitioners to perform RADid, solidifying awareness of the scientific underpinnings of the methodology, and fostering the interdisciplinary collaboration necessary to ensure the most appropriate methods are considered in any given case. The overall goal is to increase the use of these valuable techniques and, in so doing, increase the number of identifications that are successfully made in the medicolegal death-investigative community.

**Chair:**
Gary M. Hatch, MD
University of New Mexico
Rad-Path Ctr for Forensic Imaging
Albuquerque, NM

**Co-Chair:**
Sharon M. Derrick, PhD
Harris County Institute of Forensic Science
Houston, TX

**Faculty:**
Sam W. Andrews, MD
Office of Medical Investigator
Albuquerque, NM

Chandra Gerrard, BS
Office of the Medical Investigator
Rad-Path Ctr for Forensic Imaging
Albuquerque, NM

Kurt B. Nolte, MD
Rad-Path Ctr for Forensic Imaging
Office of Medical Investigator
University of NM
Albuquerque, NM

Patricia M. Flach, MD
Zurich, SWITZERLAND

**Program Description:** This presentation will provide a detailed overview of the process of using radiologic technologies for decedent identification, including historical and background information, demonstration of the various methodologies, and illustration via numerous case examples.

**Program:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>1:00 p.m. - 1:20 p.m.</td>
<td>Introduction</td>
<td>Sam W. Andrews, MD</td>
</tr>
<tr>
<td>1:20 p.m. - 1:50 p.m.</td>
<td>3D Rendering</td>
<td>Jamie Elifritz, MD</td>
</tr>
<tr>
<td>1:50 p.m. - 2:20 p.m.</td>
<td>Technique Considerations</td>
<td>Chandra Gerrard, BS</td>
</tr>
</tbody>
</table>
#11 RADid: Using Radiologic Technologies to Identify Unknown Decedents (continued)

Program cont.

2:20 p.m. - 2:50 p.m.  Advanced Imaging and Dental Identification in the Swiss Virtopsy Project
                      Patricia M. Flach, MD

2:50 p.m. - 3:20 p.m.  Break

3:20 p.m. - 4:05 p.m.  Anthropologic Approaches
                      Sharon M. Derrick, PhD

4:05 p.m. - 4:50 p.m.  Lines of Evidence and Case Examples
                      Gary M. Hatch, MD

4:50 p.m. - 5:00 p.m.  Conclusion
                      Kurt B. Nolte, MD

Targeted Audience: Anthropology, General, Odontology, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 30 Pages
#12 Implementing and Evaluating 3D Technology in a 2D World

**Monday, February 16, 2015**  
1:00 p.m. - 5:00 p.m.  
3.5 CE Hours

**Educational Objective:** After attending this presentation, attendees will have an understanding of the principles behind each of the technologies presented and the strengths and weaknesses that have been observed. The theory of use, method development, maintenance, and applications within the field of firearms/toolmarks will be discussed. The presentation will focus on the studies that have been conducted, evaluation of the data generated, and the potential impact these technologies will have in the discipline of firearms and toolmarks.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by expanding the knowledge-base regarding the use of newer technologies in the forensic firearms/toolmarks setting.

**Program Description:** This presentation will present the evaluation/validation work that has been conducted on the Sensofar® Instrument, TopMatch-GST™ 3D Imaging and Analysis System, and the Alicona® Infinite Focus® microscope. As a result of these validation experiences, an overview of the necessary validation processes that a laboratory should consider when planning to incorporate new technologies in today’s forensic laboratories will be provided as well as how to set up a training program for personnel conducting analyses with these systems. An introduction on how to report the results generated from these methodologies will be presented as well as how to approach court challenges and effectively articulate these technologies and interpretation of results in a court of law.

**Program:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>1:00 p.m. - 1:15 p.m.</td>
<td>Introduction and Overview</td>
<td>Heather J. Seubert, MS</td>
</tr>
<tr>
<td>1:15 p.m. - 2:00 p.m.</td>
<td>Confocal Microscopy</td>
<td>Deion P. Christophe, MS; Derrick McClarin, MSFS</td>
</tr>
<tr>
<td>2:00 p.m. - 2:45 p.m.</td>
<td>TopMatch-GST™ 3D Imaging and Analysis</td>
<td>Erich D. Smith, MS; Jennifer L. Stephenson, MSFS</td>
</tr>
<tr>
<td>2:45 p.m. - 3:00 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:00 p.m. - 3:30 p.m.</td>
<td>Alicona® Infinite Focus® Microscope</td>
<td>Erich D. Smith, MS; Jennifer L. Stephenson, MSFS</td>
</tr>
</tbody>
</table>
Pre-Registration Required — $125 w/registration; $150 workshop only

#12 Implementing and Evaluating 3D Technology in a 2D World (continued)

Program cont.

3:30 p.m. - 4:00 p.m.  Validation, Training, and Potential Internal Challenges With Traditional Examinations and Review of Old Cases
                      Erich D. Smith, MS

4:00 p.m. - 4:45 p.m.  Legal Challenges for New Technologies
                       Paula H. Wulff, JD

4:45 p.m. - 5:00 p.m.  Discussion

Targeted Audience: Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 25 Pages
#13 The Examination of Skillfully Simulated Signatures

**Monday, February 16, 2015**

**1:00 p.m. - 5:00 p.m.**

**3.75 CE Hours**

**Educational Objectives:** After attending this presentation, attendees will be able to examine and give opinions on signatures that may be genuine or the product of skillful simulations. Attendees will learn the requirements for a skillful simulator and the characteristics they should look for in the examination of a signature that may have been skillfully simulated.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by making attendees more aware of the features that may be present in a skillful simulation and, therefore, increasing the examiner’s reliability and accuracy in determining the authenticity of signatures.

**Chair:**
F.L. Jim Lee, Jr., MS
Eden, UT

**Co-Chair:**
Kevin P. Kulbacki, MSFS
Osborn & Son
Middlesex, NJ

**Faculty:**
Brenda N. Lanners, BS
San Diego County Sheriff’s Regional Crime Lab
San Diego, CA

Peter V. Tytell, BA
Forensic Research, LLC
New York, NY

Linton Mohammed, PhD
Forensic Science Consultants, Inc
Burlingame, CA

**Program Description:** After attending this presentation, attendees will understand the requirements of a skillful simulator. Attendees will examine and work on signature problems in which the questioned signatures are genuine or skillfully simulated.

**Program:**

1:00 p.m. - 1:30 p.m.
**Introduction:** Genuine and Skillfully Simulated Signatures
*Linton Mohammed, PhD; Peter V. Tytell, BA; Brenda N. Lanners, BS*

1:30 p.m. - 2:30 p.m.
**Hands-On Signature Examinations I — Attendees Work on Signature Problems**
*Linton Mohammed, PhD; Peter V. Tytell, BA; Brenda N. Lanners, BS*

2:30 p.m. - 2:45 p.m.
**Break**

2:45 p.m. - 3:45 p.m.
**Hands-On Signature Examinations II — Attendees Work on Signature Problems**
*Linton Mohammed, PhD; Peter V. Tytell, BA; Brenda N. Lanners, BS*

3:45 p.m. - 4:45 p.m.
**Discussions of Answers to the Problems—Indicators of Skillful Simulations**
*Linton Mohammed, PhD; Peter V. Tytell, BA; Brenda N. Lanners, BS*

4:45 p.m. - 5:00 p.m.
**General Discussion**

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Pre-Registration Required — $100 w/registration; $125 workshop only
Registration is limited to AAFS members until January 15, 2015.
#13 The Examination of Skillfully Simulated Signatures (continued)

Pre-Registration Required — $100 w/registration; $125 workshop only

Targeted Audience: Questioned Documents

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 30 Pages

Restricted Audience Size: 75
#14  On the Leading Edge of Forensic Science

Pre-Registration Required — $100 w/registration; $125 workshop only

## Educational Objective:
The goal of this presentation is to describe how new developments might impact forensic scientists in their work. Practical examples will be presented.

## Impact on the Forensic Science Community:
This presentation will impact the forensic science community by providing an overview of some of the new developments in forensic science and by opening a forum for the discussion of issues that arise regarding such developments.

## Program Description:
A wide variety of developments that will soon impact forensic science have been identified within the Think Tank Committee of the Forensic Sciences Foundation. These range from developments in facial comparison systems, labs on a chip, cloud forensics, drone forensics, cybercrime (including hacking medical devices such as insulin pumps), bitcoins, and augmented reality to 3D printing and even printing DNA for storage of information or making a clone of Van Gogh’s ear based on DNA.

## Program:

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</table>
| 1:00 p.m. - 1:15 p.m. | Opening  
*Zeno J. Geradts, PhD; Howard A. Harris, PhD, JD* |
| 1:15 p.m. - 1:45 p.m. | New Developments by the FSF Think Tank Committee, Big Data, 3D Printing, Programmable Matter, Wearable Sensors, Storing Data in DNA, and Lab on a Chip  
*Zeno J. Geradts, PhD* |
| 1:45 p.m. - 2:30 p.m. | Facial Comparison  
*Richard Vorder Bruegge, PhD* |
| 2:30 p.m. - 3:15 p.m. | Drone Forensics and Cybercrime Investigation  
*Ronald Prins, MS* |
| 3:15 p.m. - 3:45 p.m. | Break |
| 3:45 p.m. - 4:30 p.m. | Visualizing the Invisible: Hyperspectral Imaging at the Crime Scene  
*Gerda Edelman* |
#14 On the Leading Edge of Forensic Science (continued)

Program cont.

4:30 p.m. - 5:15 p.m. Virtual Reality and Augmented Reality at the Crime Scene: Hype or an Emerging Useful Technology?  
*Jurrien Bijhold, PhD*

5:15 p.m. - 5:30 p.m. Discussion and Closing

**Targeted Audience:** Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence, Pathology/Biology, Toxicology

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 80 Pages
#15 Clinical Toxicology of the Poisoned Patient  
**Tuesday, February 17, 2015**  
8:30 a.m. - 12:00 p.m.  
3.0 CE Hours

**Educational Objectives:** After attending this presentation, attendees will be able to describe the process used to evaluate, triage, and treat patients in the emergency room. They will be able to identify situations where consultation with a clinical or medical toxicologist can benefit an investigation, and find new resources available through medical toxicology professional organizations to support their investigations.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by creating better understanding between forensic science professionals and their counterparts who treat living patients prior to their deaths.

**Chair:**  
Robert A. Middleberg, PhD  
NMS Labs  
Willow Grove, PA

**Co-Chair:**  
Barry K. Logan, PhD  
NMS Labs/CFSRE  
Willow Grove, PA

**Faculty:**

Jeffrey Brent, MD, PhD  
University of Colorado School of Medicine  
Denver, CO

Paul M. Wax, MD  
University of Texas Southwestern  
Dallas, TX

Jay L. Schauben, PharmD  
University of Florida Health Science Center  
Department of Emergency Medicine  
Jacksonville, FL

**Program Description:** The goal of this presentation is to identify the similarities and differences between medical toxicology and forensic toxicology and how the two fields can work together and with other forensic professionals, including death investigators and pathologists, to improve the quality of investigative information available to help direct laboratory testing and certify cause and manner of death. The presentation will present the approaches taken by clinicians in diagnosing, treating, and managing the poisoned patient, starting from calls to poison control centers through assessment and treatment, and end-of-life patient support.

Attendees will learn how patient history and treatment information from poison control centers can be used to identify patients in need of emergent care and how such data can direct clinicians in their practice. The role of medical toxicologists in the forensic setting will also be reviewed to demonstrate both the uniqueness of the role such individuals can play as well as areas of overlap with forensic toxicologists. This will include their involvement in medicolegal consulting and areas where their expertise is complementary to that of the forensic specialist. The presentation will conclude with descriptions of the synergies between the two fields and how lessons learned can be used to enhance future forensic investigations involving poisonings. Pathologists, investigators, and toxicologists should leave this session with a better understanding of the value of the diagnostic, management, and treatment process in interpreting postmortem findings.

**Program:**

8:30 a.m. - 9:15 a.m.  
Clinical Approach to the Poisoned Patient  
*Paul M. Wax, MD*

9:15 a.m. - 10:00 a.m.  
Poison Control Centers — Data and Decision Points  
*Jay L. Schauben, PharmD*

10:00 a.m. - 10:30 a.m.  
Break
Pre-Registration Required — $125 w/registration; $150 workshop only

#15 Clinical Toxicology of the Poisoned Patient (continued)

Program cont.

10:30 a.m. - 11:15 a.m.  Role of Medical Toxicologist in Forensic Issues
                        Jeffrey Brent, MD, PhD

11:15 a.m. - 12:00 p.m. Synergies Between Medical and Forensic Toxicology
                        Robert A. Middleberg, PhD

Targeted Audience:  General, Pathology/Biology, Psychiatry & Behavioral Science, Toxicology

Knowledge Level Required:  Basic (little or no knowledge of subject presented)

Expected Handout Length:  150 pages

Supported by:  NMS Labs
#16 Your Attention, Please! — A Public Speaking Skills Workshop

Tuesday, February 17, 2015  
8:30 a.m. - 1:00 p.m.  
4.0 CE Hours

**Educational Objectives:** The goal of this presentation is to present an oral communications-skills workshop for forensic science students and professionals that will: (1) present more than 55 oral communications learning tools that attendees will be able to implement immediately; (2) facilitate thought and ideas for an effective, entertaining, and strategically planned oral presentation; and, (3) demonstrate how to be customer-focused on your audience.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by educating attendees to the fact that just being an expert in your field does not provide you with the additional skills necessary to present material in an effective manner. Strong and clear oral communication is paramount in the forensic sciences field to present legal and scientific information in a manner that can be heard, understood, and remembered by listeners. This presentation provides attendees with more than 55 learning points that can immediately be implemented to make a difference in how information is presented in the classroom, courtroom, or working environment.

**Chair:** Frank Horvath, PhD  
National Academy for Credibility Assessment  
Fort Jackson, SC

**Co-Chair:** Laura R. Ellsworth, MFS  
Bowie, MD

**Faculty:**  
Thomas P. Mauriello, MFS  
Laurel, MD  
Lynne M. Yates, BA  
Silver Spring, MD

**Program Description:** Aristotle once said, “It is not enough to know what to say — one must know how to say it.” This presentation focuses on “how to say it” with emphasis on your message being heard, understood, and remembered. It is an oral communications-training workshop for anyone needing to develop or fine-tune their skills. The presentation modules include oral presentation preparation and development, effective delivery techniques, how to read your audience, proper use of visual aids, use of nonverbal communication, and eliminating stage fright.

**Program:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
</table>
| 8:30 a.m. - 10:00 a.m. | Introduction; Objectives; Communications Model; Preparation and Development  
*Thomas P. Mauriello, MFS; Lynne M. Yates, BA* |
| 10:00 a.m. - 10:15 a.m. | Break                                        |
| 10:15 a.m. - 11:45 a.m. | Use of Mindmapping; the Audience; Delivery Techniques  
*Thomas P. Mauriello, MFS; Lynne M. Yates, BA* |
| 11:45 a.m. - 12:00 p.m. | Break                                        |
| 12:00 p.m. - 1:00 p.m.  | Use of Non-Verbals; Visual Aids; Summary  
*Thomas P. Mauriello, MFS; Lynne M. Yates, BA* |

**Targeted Audience:** All Disciplines

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 25 Pages
#17 Quality Assurance in Human Identification

Tuesday, February 17, 2015  8:30 a.m. - 5:00 p.m.  6.75 CE Hours

Educational Objectives: After attending this presentation, attendees will be able to understand the basic quality assurance principles and measures applicable to human identification. Attendees will learn the unique challenges faced by professionals involved in human identification when striving to have their facilities, procedures, and casework meet the standards demanded by the criminal justice and medicolegal systems. Attendees should be able to utilize the material presented to formulate a quality assurance program for their organizations.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating how quality assurance in forensic laboratories and forensic programs has led to objective and measurable standards of performance that ultimately strengthen and elevate the forensic profession as a whole.

Chair: Vincent J. Sava, MA
JPAC
Central Identification Lab
Joint Base Pearl Harbor-Hickam, HI

Co-Chair: John E. Byrd, PhD
Mililani, HI

Faculty:
Stephanie R. Ah Sam, MS
JPAC
Central Identification Lab
Joint Base Pearl Harbor-Hickam, HI

Thomas D. Holland, PhD
JPAC
Central Identification Lab
Joint Base Pearl Harbor-Hickam, HI

Bradford Byrnes, LLM
Hickam AFB, HI

Program Description: This presentation introduces the forensic professionals involved in human identification to basic quality assurance principles and measures. Attendees will be able to utilize these principles and measures to establish a quality assurance program for human identification within their organizations. Implementation of these quality assurance principles and measures can ultimately result in professional accreditation for their human identification programs. While the presentation focuses on the human identification laboratory, sole practitioners of human identification may find portions of the presentation useful to their own operations.

Program:

8:30 a.m. - 8:40 a.m.  Introductory Remarks
Vincent J. Sava, MA; Thomas D. Holland, PhD

8:40 a.m. - 9:10 a.m.  Overviews
Vincent J. Sava, MA

9:10 a.m. - 9:55 a.m.  Personnel
John E. Byrd, PhD

9:55 a.m. - 10:10 a.m.  Break

10:10 a.m. - 11:30 a.m.  Infrastructure & Support
Vincent J. Sava, MA
Pre-Registration Required — $200 w/registration; $250 workshop only

#17  Quality Assurance in Human Identification (continued)

Program cont.

11:30 a.m. - 12:00 p.m.  Gathering & Interpreting Evidence  
                        Vincent J. Sava, MA

12:00 p.m. - 1:00 p.m.  Lunch

1:00 p.m. - 1:30 p.m.  Ethics  
                        Bradford Byrnes, LLM

1:30 p.m. - 2:00 p.m.  Research & Development  
                        John E. Byrd, PhD

2:00 p.m. - 2:30 p.m.  Monitoring & Corrective Action  
                        Vincent J. Sava, MA

2:30 p.m. - 3:15 p.m.  Document & Records Control — Information Release  
                        Stephanie R. Ah Sam, MS

3:15 p.m. - 3:30 p.m.  Break

3:30 p.m. - 4:00 p.m.  Uncertainty of Measurement  
                        John E. Byrd, PhD

4:00 p.m. - 4:30 p.m.  Validation of Technical Procedures  
                        John E. Byrd, PhD

4:30 p.m. - 5:00 p.m.  Accreditation  
                        Vincent J. Sava, MA

Targeted Audience: Anthropology, Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 75
#18 Sadism: Distinguishing Between Criminal Behavior and Offender Analysis

Tuesday, February 17, 2015  8:30 a.m. - 5:00 p.m.  6.5 CE Hours

Educational Objective: After attending this presentation, attendees will have a conceptual and applied understanding of the complexities of sadism (sexual and nonsexual). The framework presented will begin by introducing participants to the history of sadism and reviewing its development as a psychological construct before employing a crime assessment model that utilizes the crime continuum to explicate behavior, not the psychological paradigm currently in use.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by clarifying the complexities of sadism to facilitate understanding. The attendees will learn the profound impact that sadism has in our daily forensic work in the disciplines of psychology, psychiatry, criminalistics, law, or criminal investigations, as well as in a myriad of hidden inferences in other related disciplines.

Chair:  Klaus C. Neudecker, MD  Landshut, GERMANY

Co-Chair:  Richard D. Walter, MA  Montrose, PA

Faculty:
Amanda L. Farrell, PhD  Marymount University  School of Education and Human Services  Arlington, VA

Patrick Zirpoli  Milanville, PA

Lurena A. Huffman, BS  Hampton, VA

Program Description: Since the invention of the term sadism in the late 19th century and the implementation of the different systems of psychiatric classification, conceptualization of the term and its associated behaviors has been made via a long and circuitous path. This term has been altered and changed to serve various functions and to encapsulate or exclude varying behaviors. The last modification to the term sadism was found in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V), but still it remains unclear whether sadism is a psychiatric disease (or a so-called “disorder”), a form of sexual deviance, or a criminal behavior. The clarification of this ambiguity would improve forensic-psychiatric classification, diagnosis, and therapy, as well as clarify the difference between the medical approach and the typological and behavioral analyses necessary for crime assessment and crime scene investigations.

Program:

8:30 a.m. - 8:45 a.m.  Introduction  
Amanda L. Farrell, PhD

8:45 a.m. - 10:00 a.m.  The Variant Way of Sadism in Forensic Psychiatry  
Klaus C. Neudecker, MD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:30 a.m.  Understanding Sadism and the Three Ds From the Crime Assessment Perspective  
Richard D. Walter, MA
#18  Sadism:  Distinguishing Between Criminal Behavior and Offender Analysis (continued)

Program cont.

11:30 a.m. - 12:00 p.m.  Morning Wrap-Up and Q&A Session  
   Lurena A. Huffman, BS

12:00 p.m. - 1:15 p.m.  Lunch

1:15 p.m. - 2:30 p.m.  Sexual Sadism:  Crime Behavior and Case Application  
   Richard D. Walter, MA; Patrick Zirpoli

2:30 p.m. - 3:30 p.m.  Non-Sexual Sadism:  Crime Behavior and Case Application  
   Richard D. Walter, MA; Patrick Zirpoli

3:30 p.m. - 3:45 p.m.  Break

3:45 p.m. - 4:30 p.m.  Reconciling and Clarifying the Distinctions Between Clinical and Criminological Understandings of Sadism:  Wrap-Up and Review  
   Klaus C. Neudecker, MD; Richard D. Walter, MA; Patrick Zirpoli

4:30 p.m. - 5:00 p.m.  Discussion and Q&A  
   Lurena A. Huffman, BS; Amanda L. Farrell, PhD

Targeted Audience:  General, Psychiatry & Behavioral Science

Knowledge Level Required:  Basic (little to no knowledge of subject presented)

This workshop will be devoted to conceptual and applied cases.  Accordingly, there will be some extreme examples that may be overwhelming for some persons.

Expected Handout Length:  50 Pages
#19 Automating Image Production for Forensic Document Examiners

Tuesday, February 17, 2015  
8:30 a.m. - 5:00 p.m.  
6.5 CE Hours

**Educational Objectives:** After attending this presentation, attendees will be able to automate simple tasks and will know how to combine these simple tasks into complex actions. As an example, attendees will have the ability to take physical evidence consisting of 20 request writing samples on separate forms and create a complete chart of all 20 signatures in approximately five minutes, remove colored backgrounds at the click of a button, or batch-process large quantities of images with a simple drag-and-drop action. The main focus of this presentation will be to demonstrate how the automation of common tasks associated with the production of comparison charts, image enhancement, and document-examination demonstrative aids can save time. This is accomplished primarily through the use of Adobe® Photoshop® features, actions, and droplets.

**Impact on the Forensic Science Community:** This presentation will impact the forensic society community by explaining that with the increasing documentation requirements for laboratory accreditation, court testimony, and the increasing complexity of cases, the time required for completion of many forensic document examination cases has increased significantly. To help alleviate the additional time requirements, this workshop will include various tips and tricks in Adobe® Photoshop®, Adobe® Acrobat®, and Adobe® Bridge® to reduce the amount of time the examiner spends preparing and organizing documentary evidence prior to the actual examination.

**Chair:**
Kevin P. Kulbacki, MSFS  
Osborn & Son  
Middlesex, NJ

**Co-Chair:**
F.L. Jim Lee, Jr., MS  
Eden, UT

**Faculty:**

- **Mark Goff, BA**  
  MSP Lansing Laboratory  
  Lansing, MI

- **Todd W. Welch, BA**  
  MSP Bridgeport Laboratory  
  Bridgeport, MI

**Program Description:** This presentation will feature techniques to speed up the production of documentary evidence image production.

**Program:**

- **8:30 a.m. - 10:00 a.m.**  
  Making the Most of Hardware and Software  
  *Mark Goff, BA; Todd W. Welch, BA*

- **10:00 a.m. - 10:30 a.m.**  
  Break

- **10:30 a.m. - 12:00 p.m.**  
  Image Naming, Organizing, and Searching  
  *Mark Goff, BA; Todd W. Welch, BA*

- **12:00 p.m. - 1:00 p.m.**  
  Lunch

- **1:00 p.m. - 3:00 p.m.**  
  Creating Actions  
  *Mark Goff, BA; Todd W. Welch, BA*

- **3:00 p.m. - 3:30 p.m.**  
  Break

- **3:30 p.m. - 5:00 p.m.**  
  Batch Processing  
  *Mark Goff, BA; Todd W. Welch, BA*
#19 Automating Image Production for Forensic Document Examiners (continued)

Targeted Audience: Questioned Documents

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 34 Pages

Restricted Audience Size: 30
#20 Cognitive Bias Issues in the Forensic Analysis of Pattern and Impression Evidence and in Medicolegal Evaluations

Tuesday, February 17, 2015  
8:30 a.m. - 5:00 p.m.  
7.0 CE Hours

Educational Objectives: After attending this presentation, the attendees will be acquainted with the different types of bias that can influence the outcome of forensic investigations. Attendees will learn about classic psychological research studies and real-life case histories demonstrating the effects of bias upon interpretations of pattern and impression evidence and upon medicolegal evaluations and assessments, especially in Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) cases. Attendees will also discover how bias can improperly sway the perceptual and cognitive judgments of forensic examiners and produce faulty conclusions, even in the absence of malicious intent.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by clearly demonstrating how various types of bias can adversely impact evaluations of evidence and decision-making in all forensic disciplines. Understanding the sources of bias and learning how to limit or minimize their influence is essential for improving the reliability and accuracy of decisions made by forensic experts and avoiding miscarriages of criminal and civil justice. All forensic scientists and laboratory directors must be keenly aware of the potential for bias and the types of internal procedures and protocols that can and should be implemented to minimize the impact of bias in forensic investigations and casework.

Chair:  
Andrew Sulner, MSFS, JD  
Forensic Document Examinations, LLC  
New York, NY

Co-Chair:  
Barry C. Scheck, JD  
The Innocence Project  
New York, NY

Faculty:  
Keith A. Findley, JD  
University of Wisconsin Law School  
Madison, WI

Michael Risinger, JD  
One Newark Center  
Newark, NJ

Bruce E. Herman, MD  
University of Utah School of Medicine  
Dept of Pediatrics  
Salt Lake City, UT

Donald E. Shelton, JD, PhD  
Saline, MI

Saul Kassin, PhD  
John Jay College of Criminal Justice  
New York, NY

Dan S. Simon, LLB, MBA, SJD  
University of Southern California  
Gould School of Law  
Department of Psychology  
Los Angeles, CA

William C. Thompson, PhD, JD  
University of California  
Dept of Criminology  
Law & Society  
Irvine, CA

Glenn M. Langenburg, PhD  
Saint Paul, MN

Deborah Tuerkheimer, JD  
Northwestern University School of Law  
Chicago, IL

Daniel A. Martell, PhD  
Park Dietz & Associates  
Newport Beach, CA

Daniel C. Murrie, PhD  
Charlottesville, VA
Program Description: A multidisciplinary faculty of distinguished psychologists, lawyers, forensic scientists, and others will provide attendees with a clear picture and concrete examples of how and why bias affects the outcome of forensic investigations. Attendees will learn about the various experimental research studies that reveal the susceptibility of investigations to the prospect of psychological error due to cognitive and motivational factors, thereby increasing the risk of miscarriages of criminal and civil justice. Attendees will learn about practices that should be avoided and followed in order to minimize potential biasing influences. Examples from actual forensic casework in both criminal and civil cases will be used to illustrate the impact of bias on the outcome of forensic examinations and the manner in which such opinions are reported or expressed in court. Attendees will also learn about how proffered expert opinion evidence tainted by bias can be challenged or impeached at trial and how trial judges may rule on the admissibility of such evidence in the face of challenges predicated on examiner (cognitive) bias.

Program:

8:30 a.m. - 8:35 a.m.  |  Introductory Remarks by AAFS President Daniel A. Martell, PhD  
Daniel A. Martell, PhD

8:35 a.m. - 9:05 a.m.  |  Bias Control: The National Commission on Forensic Science, The National Institute of Standards and Technology (NIST) and the Draft Guidance on Cognitive Bias Effects From the Forensic Science Regulator for England and Wales  
Michael Risinger, JD

9:05 a.m. - 9:40 a.m.  |  Bias Effects in Forensic Handwriting Investigations and Expert Testimony: An Insider’s View  
Andrew Sulner, MSFS, JD

9:40 a.m. - 10:15 a.m.  |  Bias in Forensic Science Evidence: A Judicial Perspective  
Donald E. Shelton, JD, PhD

10:15 a.m. - 10:30 a.m.  |  Break

10:30 a.m. - 11:15 a.m.  |  Cognitive and Motivational Causes of Investigative Error  
Dan S. Simon, LLB, MBA, SJD

11:15 a.m. - 12:00 p.m.  |  The Forensic Confirmation Bias: Problems in Human Nature and Solutions  
Saul Kassin, PhD

12:00 p.m. - 1:00 p.m.  |  Lunch

1:00 p.m. - 1:30 p.m.  |  Recent Research Addressing Cognitive Bias in Forensic Evaluations and Psychological Assessments  
Daniel C. Murrie, PhD

1:30 p.m. - 2:00 p.m.  |  Bias Effects in Forensic Science: A Perspective From a Caseworking Forensic Scientist Who Uses Sequential Unmasking Techniques  
Glenn M. Langenburg, PhD
Pre-Registration Required — $200 w/registration; $250 workshop only

#20  Cognitive Bias Issues in the Forensic Analysis of Pattern and Impression Evidence and in Medicolegal Evaluations (continued)

Program cont.

2:00 p.m. - 2:45 p.m.  Contextual Bias and Domain-Relevance: Lessons From Weapons of Mass Destruction (WMD) Forensics
William C. Thompson, PhD, JD

2:45 p.m. - 3:00 p.m.  Break

3:00 p.m. - 3:30 p.m.  Cognitive Bias Issues in Evaluating Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT)
Deborah Tuerkheimer, JD

3:30 p.m. - 4:00 p.m.  Cognitive Bias Issues in Evaluating Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT): An Emergency Room Pediatrician’s View
Bruce E. Herman, MD

4:00 p.m. - 4:30 p.m.  A Critical Look at Cognitive Bias Issues in Expert Testimony About Non-Accidental Head Injury
Keith A. Findley, JD

4:30 p.m. - 5:00 p.m.  Cognitive Bias Issues in Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) Cases: A Litigation Perspective
Barry C. Scheck, JD

Targeted Audience: All Disciplines

Knowledge Level Required: Basic (little or no knowledge of subject presented)

Expected Handout Length: 600 Pages
#21 Death in a Bathtub: The Trial of Drew Peterson

Tuesday, February 17, 2015  8:30 a.m. - 5:00 p.m.  6.0 CE Hours

**Educational Objectives:** After attending this presentation, attendees will understand the courtroom procedures for admission of evidence and expert witness testimony. In addition, attendees will learn the factors involved in injury identification and analysis with an emphasis on the investigation of drowning.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by presenting the multidisciplinary reconstruction of one of the most riveting cases in recent American trial history. This presentation will detail the factors and evidence that influenced the decision-making process and will assist future prosecutors, judges, and death investigators in courtroom procedures.

**Chair:**
Mary E.S. Case, MD  
St. Louis, MO

**Co-Chair:**
Jeffrey M. Jentzen, MD  
University of Michigan  
Ann Arbor, MI

**Faculty:**
James Glasgow, JD  
Will County States Attorney’s Office  
Joliet, IL

Andrea Zeferes, BA  
Shokan, NY

**Program Description:** This presentation brings together many of the experts as well as the prosecutor involved in the 2012 trial of Drew Peterson. The trial was truly unique in the scope of the evidence, precedent-setting legislation, and the personalities involved. This presentation will discuss the investigative, pathological, and criminalistic evidence as well as legal strategies used in one of the most exciting trials in recent history.

**Program:**

8:30 a.m. - 9:15 a.m.  
Initial Case Investigation  
*Mary E.S. Case, MD; Jeffrey M. Jentzen, MD*

9:15 a.m. - 10:00 a.m.  
Initial Pathology Findings  
*Mary E.S. Case, MD; Jeffrey M. Jentzen, MD*

10:00 a.m. - 10:30 a.m.  
Break

10:30 a.m. - 11:15 a.m.  
Prosecution Strategy  
*James Glasgow, JD*

11:15 a.m. - 12:00 p.m.  
Prosecution Expert  
*Mary E.S. Case, MD*

12:00 p.m. - 1:30 p.m.  
Lunch

1:30 p.m. - 2:15 p.m.  
Drowning Expert  
*Andrea Zeferes, BA*

2:15 p.m. - 3:00 p.m.  
Defense Medical Expert  
*Jeffrey M. Jentzen, MD*
#21  Death in a Bathtub: The Trial of Drew Peterson (continued)

Program cont.

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>3:00 p.m. - 3:30 p.m.</td>
<td>Break</td>
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<tr>
<td>3:30 p.m. - 4:15 p.m.</td>
<td>Closing Arguments</td>
<td>James Glasgow, JD; Jeffrey M. Jentzen, MD</td>
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<tr>
<td>4:15 p.m. - 5:00 p.m.</td>
<td>Audience “Jury” Questions and Answers</td>
<td>Mary E.S. Case, MD; James Glasgow, JD; Jeffrey M. Jentzen, MD; Andrea Zeferes, BA</td>
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**Targeted Audience:** Criminalistics, General, Jurisprudence, Pathology/Biology

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 75 Pages
#22  Looking Toward a Greater Awareness of Youth Street Gangs

**Tuesday, February 17, 2015**  
8:30 a.m. - 5:30 p.m.  
7.25 CE Hours

**Educational Objectives:** After attending this presentation, attendees will be able to: (1) explain the organization and historical evolution of youth street gangs (examining African American, Latino, Asian, and Caucasian youth street gang activities from the crimes they commit to their tattoos, graffiti, and hand signs); (2) distinguish the behavioral differences and similarities between gangs (evaluating why one decides to join a gang and the motivational factors that play a role in gang membership); (3) compare and contrast activities of various gangs; and, (4) explore the issue of female gang members and sexual assault.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by increasing understanding of the crimes and circumstances that involve youth street gangs.

**Chair:**  
Cliff Akiyama, MPH, MA  
Akiyama and Associates, LLC  
Philadelphia, PA

**Co-Chair:**  
Janet B. Duval, MSN  
Greensburg, IN

**Program Description:** This presentation will focus on the history and growth of youth street gangs in the United States with particular emphasis on gang behavior and psychology, identification, and criminal activity. Participants will learn about the motivation and other environmental/community factors that drive youths to join gangs.

**Program:**

8:30 a.m. - 8:35 a.m.  
Welcome  
Cliff Akiyama, MPH, MA

8:35 a.m. - 9:45 a.m.  
Introduction to Youth Street Gangs: Definition of a Youth Gang, Gang Typologies, Gang Structure, and Gang Motivation  
Cliff Akiyama, MPH, MA; Janet B. Duval, MSN

9:45 a.m. - 10:45 a.m.  
African American Gangs  
Cliff Akiyama, MPH, MA

10:45 a.m. - 11:00 a.m.  
Break

11:00 a.m. - 12:00 p.m.  
Latino Gangs  
Cliff Akiyama, MPH, MA

12:00 p.m. - 1:15 p.m.  
Lunch

1:15 p.m. - 2:15 p.m.  
Asian Gangs  
Cliff Akiyama, MPH, MA

2:15 p.m. - 2:45 p.m.  
Female Gangs and Sexual Violence  
Cliff Akiyama, MPH, MA; Janet B. Duval, MSN

2:45 p.m. - 3:45 p.m.  
Skinhead Gangs and Hate Groups  
Cliff Akiyama, MPH, MA
#22  Looking Toward a Greater Awareness of Youth Street Gangs (continued)

Program cont.

3:45 p.m. - 4:00 p.m.  Break
4:00 p.m. - 4:30 p.m.  Gang Enhancement Laws and Civil Injunctions  
                       Cliff Akiyama, MPH, MA
4:30 p.m. - 5:00 p.m.  Gang Intervention and Prevention (Risk and Protective Factors)  
                       Cliff Akiyama, MPH, MA
5:00 p.m. - 5:30 p.m.  Questions and Answers  
                       Cliff Akiyama, MPH, MA; Janet B. Duval, MSN

Targeted Audience:  Anthropology, Criminalistics, Digital & Multimedia Sciences, General, Jurisprudence, Pathology/Biology, Psychiatry & Behavioral Science, Toxicology

Knowledge Level Required:  Basic (little to no knowledge of subject presented)

Expected Handout Length:  12 Pages
Pre-Registration Required — $200 w/registration; $250 workshop only

#23 Hands-On Evaluation of the Thanatomicrobiome and Epinecrotic Communities

Tuesday, February 17, 2015 9:00 a.m. - 5:00 p.m.  6.0 CE Hours

Educational Objectives: After attending this presentation, attendees will be able to: (1) describe the process by which crime scene investigators approach human remains for the collection of microbial and entomological evidence; (2) collect genomic DNA evidence from human cadaver-associated soil using readily available DNA extraction kits to isolate and assess the quality of genomic DNA to be used in downstream molecular applications; (3) describe and critically evaluate the benefits and challenges of the thanatomicrobiome and epinecrotic communities for use in forensic research and potential use during investigations for estimating the Postmortem Interval (PMI); (4) discuss the bioinformatics of specific sequencing platforms and the use of multivariate statistical procedures and modeling that are increasingly being used in metagenomic analyses or postmortem microbial communities; and, (5) understand and appreciate the benefits of outdoor decomposition facilities for more realistic studies of postmortem microbial communities.

Additionally, attendees will participate in a hands-on experience learning techniques to extract DNA from: (1) cadaver-soil samples; (2) eggs, larvae, pupae, and adult insects; and, (3) cadaver postmortem microbial communities.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an introduction to the principles behind the potential use of postmortem microbial communities in death scene investigations and the methods to use in extracting microbial DNA from a variety of sources. Emphasis will be placed on introducing new forensic scientists to practical aspects of DNA extraction techniques and the use of thanatomicrobiome and epinecrotic communities in the estimation of the PMI.

Chair:
Gulnaz T. Javan, PhD
Alabama State University
Forensic Science Program
Montgomery, AL

Co-Chair:
M. Eric Benbow, PhD
Michigan State University
Departments of Entomology & Medical Specialties
East Lansing, MI

Faculty:
Ismail Can
Montgomery, AL

Sharon L. Plotkin, MS
Miami Dade College
Miami, FL

Sheree J. Finley, MS
Alabama State University
Montgomery, AL

Daniel J. Wescott, PhD
Texas State University
Dept of Anthropology
San Marcos, TX

Jennifer L. Pechal, PhD
Michigan State University
East Lansing, MI

Program Description: Accurate estimation of Postmortem Interval (PMI) is a major challenge for forensic examiners. Advances in DNA sequencing technology have created new possibilities and approaches to PMI estimation. Use of these techniques has generated new areas of research for scientists. This presentation is intended to provide attendees with an introduction to this emerging approach to PMI estimation.

Program:

9:00 a.m. - 9:10 a.m. Welcoming Remarks
Gulnaz T. Javan, PhD
#23 Hands-On Evaluation of the Thanatombiome and Epinecrotic Communities (continued)

**Program cont.**

9:10 a.m. - 9:25 a.m.  Significance of Thanatombiome for Forensic Scientists  
*Gulnaz T. Javan, PhD*

9:25 a.m. - 9:45 a.m.  Crime Scene Uses of Thanatombiome and the Epinecrotic Communities  
*Sharon L. Plotkin, MS*

9:45 a.m. - 10:05 a.m.  Demonstration of Extraction Method for Genomic DNA From Cadaver Soil-Samples: A Hands-On Approach  
*Shereen J. Finley, MS*

10:05 a.m. - 10:25 a.m.  The Importance of Thanatombiome and Epinecrotic Communities for Forensic Entomology  
*M. Eric Benbow, PhD*

10:25 a.m. - 10:40 a.m.  Break

10:40 a.m. - 11:00 a.m.  Using Human Decomposition Facilities to Study Thanatombiome and Epinecrotic Communities: Forensic Anthropology Center at Texas State  
*Daniel J. Wescott, PhD*

11:00 a.m. - 11:30 a.m.  Overview of DNA Extraction, PCR (Polymerase Chain Reaction), and NGS (Next Generation Sequencing)  
*Gulnaz T. Javan, PhD; Ismail Can*

11:30 a.m. - 12:00 p.m.  Bioinformatic Data Analysis and Multivariate Statistical Interpretation  
*Jennifer L. Pechal, PhD; M. Eric Benbow, PhD*

12:00 p.m. - 1:30 p.m.  Lunch

1:30 p.m. - 2:30 p.m.  DNA Extraction From Cadaver Soil Samples (Hands-On)  
*Gulnaz T. Javan, PhD; Shereen J. Finley, MS; Ismail Can; Jennifer L. Pechal, PhD*

2:30 p.m. - 3:30 p.m.  DNA Extraction From Eggs, Larvae, Pupae and Adult Insects (Hands-On)  
*Gulnaz T. Javan, PhD; Shereen J. Finley, MS; Ismail Can*

3:30 p.m. - 4:30 p.m.  DNA Extraction From Microbial Communities (Hands-On)  
*Gulnaz T. Javan, PhD; Shereen J. Finley, MS; Ismail Can*

4:30 p.m. - 5:00 p.m.  Discussion

**Targeted Audience:** Pathology/Biology

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 50 Pages

**Restricted Audience Size:** 25
#24 Scientific Neutrality in Expert Witness Testimony

Tuesday, February 17, 2015  
1:00 p.m. - 5:00 p.m.  
3.5 CE Hours

Educational Objectives: After attending this presentation, attendees will better understand: (1) how to achieve neutrality in the preparation for and presentation of both direct and cross-examination in court; (2) how to testify within the limits of his/her expertise; (3) the role and responsibilities of the expert witness in and out of the courtroom and how the expert testimony relates to the roles and responsibilities of the judge and the prosecuting and defense attorneys; and, (4) the importance of being a neutral expert witness.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by elucidating the importance and value to our justice system of an expert witness who maintains neutrality during expert witness testimony in depositions and in the courtroom. This presentation will provide all current and future expert witnesses in all areas of forensic sciences an opportunity to learn from an experienced expert witness and other knowledgeable members of the courtroom, including a judge, a defense attorney, and a prosecuting attorney.

Pre-Registration Required — $125 w/registration; $150 workshop only

Chair: Charlotte J. Word, PhD  
Gaithersburg, MD

Co-Chair: Scott G. Scoville, JD  
Santa Ana, CA

Faculty:

Lewis H. Buzzell III, JD  
Private Criminal Defense Attorney  
Jacksonville, FL

Ronald Reinstein, JD  
AZ Supreme Court  
Phoenix, AZ

Program Description: Attendees may be inclined to believe that they play the role of an advocate since they are called by either the prosecution or defense. However, it is the forensic scientist’s role to ensure that expert testimony is factual, truthful, and unbiased. Valuable tools for effective presentation of scientific evidence while maintaining neutrality will be provided from the perspective of an experienced prosecuting attorney, defense attorney, judge, and expert witness. The respective roles of the judge, the attorneys, and the forensic science expert witness in the courtroom and how the roles impact the testimony of the expert witness will be discussed. Relevant issues and questions will be discussed with practical advice and applications of the information provided.

Program:

1:00 p.m. - 1:10 p.m.  
Introduction  
Charlotte J. Word, PhD

1:10 p.m. - 1:35 p.m.  
Role and Responsibilities of the Prosecuting Attorney  
Scott G. Scoville, JD

1:35 p.m. - 2:00 p.m.  
Role and Responsibilities of the Defense Attorney  
Lewis H. Buzzell III, JD

2:00 p.m. - 2:25 p.m.  
Role and Responsibilities of the Judge  
Ronald Reinstein, JD

2:25 p.m. - 2:50 p.m.  
Role and Responsibilities of the Forensic Science Expert Witness  
Charlotte J. Word, PhD

2:50 p.m. - 3:10 p.m.  
Break
#24 Scientific Neutrality in Expert Witness Testimony (continued)

Program cont.

3:10 p.m. - 3:50 p.m.  Qualifying as an Expert Witness, Preparing for Court Testimony & Pre-Trial Preparation
_Charlotte J. Word, PhD; Scott G. Scoville, JD; Lewis H. Buzzell III, JD; Ronald Reinstein, JD_

3:50 p.m. - 5:00 p.m.  Panel Discussion — Pre-Planned Relevant Questions/Scenarios & Questions From the Audience
_Charlotte J. Word, PhD; Scott G. Scoville, JD; Lewis H. Buzzell III, JD; Ronald Reinstein, JD_

**Targeted Audience:** All Disciplines

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 70 Pages
American Society of Forensic Odontology
45th Annual Scientific Session
Hyatt Regency Orlando

Registration can be accomplished on the ASFO website at www.asfo.org beginning in November.

Bitemarks: Past, Present, and Future

Tuesday
February 17, 2015 — 7:00 a.m. - 5:30 p.m.

Program:

7:00 a.m. - 8:00 a.m. Registration and Breakfast

8:00 a.m. - 8:10 a.m. Welcome
Richard A. Weems, DMD, MS
President, American Society of Forensic Odontology

8:10 a.m. - 8:30 a.m. Program Introduction & Doyle Case — Texas
Roger D. Metcalf, DDS, JD
President-Elect, American Society of Forensic Odontology

8:30 a.m. - 8:45 a.m. National Institute of Standards and Technology (NIST)/Organization for Scientific Area Committees (OSAC) — Where Research Fits In
Robert E. Barsley, DDS, JD

8:45 a.m. - 9:30 a.m. ASFO/ABFO History and Bitemark Analysis
Norman D. Sperber, DDS

9:30 a.m. - 10:15 a.m. Marx Case — California
Gregory S. Golden, DDS

10:15 a.m. - 10:30 a.m. Break

10:30 a.m. - 11:15 a.m. Bundy Case — Florida
Richard R. Souviron, DDS

11:15 a.m. - 12:00 p.m. Current State of Bitemark Research
Franklin D. Wright, DMD

12:00 p.m. - 1:45 p.m. Luncheon and Annual Business Meeting

1:45 p.m. - 2:30 p.m. Potential Future Research Directions in Forensic Odontology
Robert B. J. Dorion, DDS

2:30 p.m. - 3:15 p.m. Potential Future Research Directions in Forensic Odontology
Iain A. Pretty, DDS, PhD
Program cont.

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<th>Time</th>
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<tr>
<td>3:15 p.m. - 3:30 p.m.</td>
<td>Break</td>
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</table>
| 3:30 p.m. - 4:00 p.m. | Potential Future Research Directions in Forensic Odontology  
   *Emilio Nuzzolese, PhD*                                           |
| 4:00 p.m. - 4:30 p.m. | Current/Ongoing Research: Bitemark Videos – High Speed Videography  
   *Mark T. Eilers, DMD*                                            |
| 4:30 p.m. - 5:15 p.m. | Current/Ongoing Research and PhotoDocumentor Software  
   *John Melville, MD*                                              |
| 5:15 p.m. - 5:30 p.m. | Expectations for Bitemark Research  
   *David R. Senn, DDS*                                            |
National Association of Medical Examiners  
2015 Interim Scientific Program  
Hyatt Regency Orlando

A separate registration fee payable to the National Association of Medical Examiners (NAME) is required to attend this Scientific Program. To join or attend, contact Denise McNally, NAME Executive Director at (660) 734-1891 or at name@thename.org.

Legal Issues in Forensic Pathology and Death Investigation

Tuesday

February 17, 2015 — 12:55 p.m. - 5:00 p.m.

This program will include discussion of: (1) forensic science legislation; (2) forensic pathology and malpractice; and, (3) legal issues in forensic pathology and death investigations. The program will be constructed to allow for CME and SAMs credits.

12:55 p.m. - 1:00 p.m. Welcome  
Marcus B. Nashelsky, MD

1:00 p.m. - 1:20 p.m. What’s Happening in Forensic Science Legislation/Initiatives  
Victor W. Weedn, MD, JD

1:20 p.m. - 1:35 p.m. HIPPA: What the Medical Examiner Needs to Know  
Karin M. Zaner, JD

1:35 p.m. - 1:55 p.m. Courts 101 the International Experience — Comparative Law  
Chris Milroy, MD, LLB

1:55 p.m. - 2:15 p.m. Courts and the Confrontation Clause Case Series  
John C. Hunsaker III, JD, MD

2:15 p.m. - 2:30 p.m. 6th Amendment, Surrogate Testimony, and the Fellowship Experience  
Donald R. Jason, MD, JD

2:30 p.m. - 2:45 p.m. Questions & Answers

2:45 p.m. - 3:15 p.m. Break

3:15 p.m. - 3:35 p.m. The Investigation of Torture — What Happens When There is No Legal System?  
Alejandro Moreno, MD, JD

3:35 p.m. - 3:50 p.m. Forensic Pathology and Malpractice: Do You Need Private Insurance?  
Ronald K. Wright, MD, JD

3:50 p.m. - 4:15 p.m. The Expert Witness — Defense/Prosecutor Relationship Boundaries  
Jeffery L. Ashton, JD
Legal Issues in Forensic Pathology and Death Investigation (continued)

Program cont.

4:15 p.m. - 4:40 p.m. Panel Discussion — Being the “Expert Witness”
Ronald K. Wright, MD, JD; Kris L. Sperry, MD; Judy Melinek, MD;
Lee Ann Grossberg, MD

4:40 p.m. - 5:00 p.m. Questions & Answers

CME STATEMENTS FOR JOINTLY SPONSORED ACTIVITIES

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of MedChi, The Maryland State Medical Society, and the National Association of Medical Examiners. MedChi is accredited by the ACCME to provide continuing medical education for physicians.

MedChi designates this live activity for a maximum of 3.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Continuing Education Administration Fee
There is an administrative charge ($75 pre-registration, $100 on-site registration) for persons wishing to receive this credit. It will be necessary for you to complete a program evaluation as well as pay the administrative fee to receive CME credit for this meeting.

Self-Assessment Module
The American Board of Pathology has deemed the National Association of Medical Examiners to be an approved provider of Self-Assessment Modules (SAMs) for the Life-Long Learning and Self-Assessment Requirement (Part II) for Maintenance of Certification in Forensic Pathology. This activity has been planned and implemented in accordance with those guidelines and qualify for a maximum of 3.5 hours of SAMs. There is an administrative charge of $35 for Members and $105 for Non-Members.

Registration Fee
There is a registration fee of $100 pre-registration and $150 on-site registration. Registration for this event is separate from the AAFS registration process. Contact Denise McNally at (660) 734-1891 or email name@thename.org to receive a registration form.
Due to potential changes in the program, the AAFS encourages you to access the most up-to-date schedule on the AAFS website at www.aafs.org.
### Poster Session

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<th>Time</th>
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| 11:30 a.m. | **A1** Temporal Patterns of Mexican Migrant Ancestry: Implications for Identification  
Cris E. Hughes, PhD*; Bridget F.B. Algee-Hewitt, PhD; Elizabeth S. Clausing;  
Bruce E. Anderson, PhD                                                                 |
| 11:30 a.m. | **A2** “I Learned About My Death From the Newspapers” — Misidentification Following  
Cutbacks After a Spending Review  
Ilaria De Vitis; Liliana Innumorato, MD; Vittoria Del Vecchio, MD; Leonardo Traversa, MD;  
Valentina Ronco, MD; Valeria Viterbo, MD; Francesco Introna, MD*                        |
| 11:30 a.m. | **A3** The Relevance of a Multidisciplinary Approach in the Identification of Skeletal  
Remains: A Case Report  
Monica Pedretti, MD; Stefania Fornaro, MD; Laura Roas, MD*; Valentina Bugelli, MD;  
Isabella Spinetti, PhD; Claudia Giaconi, MD; Davide Caramella, MD; Simona Minuzzi;  
Marco Caccianiga, PhD; Luigi Papi; Ranieri Domenici, MD                                 |
| 11:30 a.m. | **A4** Estimation of Age From the Adult Pelvis: A Comparison Across Different Pelvic Sites  
and Statistical Methods  
Molly Miranker; BA*                                                                       |
| 11:30 a.m. | **A5** Plaque and Projections: Assessing the Utility of Morphological Variants of the Sternal  
Fourth Rib for the Estimation of Sex and Age-at-Death  
Andrew C. Seidel, MA*; Laura C. Fulginiti, PhD; Kristen Hartnett, PhD                   |
| 11:30 a.m. | **A6** Sex Determination Using the Distal Articular Surface of the Fibula  
Michelle U. Tabencki, MA*                                                               |
| 11:30 a.m. | **A7** WITHDRAWN                                                                 |
| 11:30 a.m. | **A8** A Qualitative Assessment of Bilateral Pubic Symphyseal Face Asymmetry Using the  
Suecby-Brooks Method for Adult Age-at-Death Estimation  
Amy C. Beresheim, MA*                                                                  |
| 11:30 a.m. | **A9** Visual Analysis of Maxillary Sinus Variability for Identification of Unknown Decedents  
Kelsey Collins, BA*                                                                     |
| 11:30 a.m. | **A10** Success Rates of Sex Estimation by Forensic Anthropologists Using Real-Life Forensic  
Casework Data  
Richard M. Thomas, PhD*; Connie L. Parks, MA; Adam H. Richard, MA                   |
| 11:30 a.m. | **A11** Quantifying Bias in Applying the Asian Equations of Trotter and Gleser to  
Korean Samples  
Yangsung Jeong, MA*; Lee Meadows Jantz, PhD; Eun Jin Woo, PhD; Yu Ryang Jang, PhD            |
| 11:30 a.m. | **A12** A Pilot Study Investigating 3D Variation in the Frontal Sinuses  
Sarah M. Richer, MA*                                                                  |

*Presenting Author
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<td>11:30 a.m.</td>
<td>A13</td>
<td>Use of Measurements Derived From Computed Tomography (CT) Head Scans of Modern Americans for Comparison to the Forensic Data Bank of FORDISC® 3.0</td>
<td>Terrie Simmons-Ehrhardt, MA*; Christopher J. Ehrhardt, PhD; Keith L. Monson, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A14</td>
<td>The Effects of Household Bleach on Bone in the Processing of Forensic Remains</td>
<td>Bobbie J. Leeper, MS*; Michael I. Siegel, PhD; Margaret A. Judd, PhD; Sarah E. Henderson, PhD; Alejandro J. Almarza, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A15</td>
<td>The Influence of Alkaline or Acid Liquids on Cut Marks and on the Structure of Bone: An Experimental Study on Porcine Ribs</td>
<td>Alberto Amadasi*, Arianna Camici, BA; Debora Mazzarelli, BS; Davide Porta, BS; Luca Sironi, PhD; Cristina Cattaneo, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A16</td>
<td>Thermal Analyses of Property Changes and Weight Loss in Incinerated Bone and Their Implications for Forensic Anthropology</td>
<td>Sarah Ellingham, MSc*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A17</td>
<td>Effects of Soil Environment on Bone Mass: A Human Prospective Taphonomic Study</td>
<td>Yann Delannoy, MD*; Thomas Colard, DDS, PhD; Cindy Aubernon, MS; Julien Boulay, MSc; Valéry C. Hedouin, MD, PhD; Didier Gosset, MD, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A18</td>
<td>The Identification of Undocumented Border Crossers Along the United States-Mexico Border: A Case for Bone Histology</td>
<td>Sophie Mavroudas, MA*; Kate Spradley, PhD; James P. Fancher, DDS; Hailey A. Duecker, BA; Nicole M. Crowe</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A19</td>
<td>The Influence of Taphonomic Changes and Microstructure Varieties on Histomorphological Analysis in Species Determination</td>
<td>Katrin Koel-Abt, PhD*; Miranda M. Jans, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A20</td>
<td>Stable and Heavy Isotope Analysis: The Successful Use of Chemical Research in the Tampa Bay Cold Case Initiative</td>
<td>Liotta N. Dowdy, BS*; Erin H. Kimmerle, PhD; George D. Kamenov, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A21</td>
<td>A Preliminary Study for Estimating Postmortem Interval of Fabric Degradation in Central Florida</td>
<td>Patrisha L. Meyers, BA*; Lorraine Humbert, BA; John J. Schultz, PhD; Lana Williams, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A22</td>
<td>Decomposition in Concrete: Los Angeles Style</td>
<td>Elizabeth A. Miller, PhD*; Margaret A. Kaleuati, MS</td>
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<td>11:30 a.m.</td>
<td>A23</td>
<td>A Test of Wright and Vasquez on an American Population</td>
<td>Carrie B. LeGarde, MA*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A24</td>
<td>Bilateral Asymmetry in Age-Related Trait Expression of the Pubic Symphysis and Auricular Surface of the Ilium</td>
<td>Kyle A. McCormick, MA*; Michael W. Kenyhercz, MS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A25</td>
<td>A Validation Study of Sex Estimation From the Scapula and Clavicle in a Modern United States Population</td>
<td>Danna N. Bran, BA*</td>
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*Presenting Author
11:30 a.m. - 1:00 p.m. A26 Classification of a Sample of Chinese Males From Cuba Using FORDISC® 3.1
Kaleigh C. Best, BA*; Stephen D. Ousley, PhD; Curtis W. Wienker, PhD

11:30 a.m. - 1:00 p.m. A27 Multi-Method Resolution of Small-Scale Commingling
Janet E. Finlayson, MA*; Eric J. Bartelink, PhD; Alexandra Perrone, MA; Kevin Dalton, MA

11:30 a.m. - 1:00 p.m. A28 The Optimized Summed Scored Attributes Method for the Classification of American Blacks and Whites: A Validation Study
Michael W. Kenyhercz, MS; Alexandra R. Klaes, PhD; Christopher W. Rainwater, MS; Sara M. Fredette, BS*

11:30 a.m. - 1:00 p.m. A29 Vertebral Maturation in Age Estimation: Further Testing the Revised Method of Scoring the Timing and Progress of Epiphyseal Ring Union
A. Midori Albert, PhD; Kate D. Sherwood*

11:30 a.m. - 1:00 p.m. A30 Reliability of Cranio metric Measurements Using a Variety of Imaging Technologies
Adam H. Richard, MA*; Connie L. Parks, MA; Keith L. Monson, PhD

11:30 a.m. - 1:00 p.m. A31 Living Body Mass Estimation From Skeletal Elements in Forensic Contexts
Tyler E. Dunn*

11:30 a.m. - 1:00 p.m. A32 Skeletal Indicators of Shark Feeding on Human Remains: A Case Study From the Eastern Coast of Florida
Michala K.S. Schaye*; Allysha P. Winburn, MA; George H. Burgess, MS

11:30 a.m. - 1:00 p.m. A33 A Protocol for the Collection and Culture of Microbes From the External Surfaces of Human Bone
Ashlee R. Griffin, BS*

11:30 a.m. - 1:00 p.m. A34 A Comparative Analysis of Macroscopic, Microscopic, and Chemical Alterations in Modern and Ancient Bones: A Preliminary Study
Valentina Caruso, BSc; Giorgio Caudullo, MA; Valentina Scarpulla, BSc; Emanuela Maderna, BSc; Annalisa Cappella, BS; Emanuela Sguazza, BSc; Debora Mazzarelli, BS; Alberto Amadasi*; Luca Trombino; Cristina Cattaneo, PhD

Thursday - Session I
Past, Present, and Future (New) Research in Forensic Taphonomy

Moderator: Franklin E. Damann, PhD
NMHM
Silver Spring, MD

Co-Moderator: Beatrix Dudzik, MA
Knoxville, TN

8:30 a.m. - 8:45 a.m. A35 A Comparative Study of Human Decomposition Research Facilities in the United States: The Role of “Body Farms” in Forensic Applications
Nicole S. Klein, BA*

8:45 a.m. - 9:00 a.m. A36 A Look Into the Past, Present, and Future of Decomposition Research and the Estimation of the Postmortem Interval
Nicholas V. Passalacqua, PhD*; Mary S. Megyesi, PhD

*Presenting Author
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| 9:00 a.m.    | A37     | Inter-Observer Reliability of the Total Body Score System for Quantifying Human Decomposition  
Gretchen R. Dabbs, PhD*; Melissa A. Connor, PhD; Joan A. Bytheway, PhD |
| 9:15 a.m.    | A38     | An Innovative Analysis of the Postmortem Interval and Its Role in Juvenile Decomposition  
Amanda R. Hale, MA*; Ann H. Ross, PhD |
| 9:30 a.m.    | A39     | Human Identification From Burnt Remains  
Joe Adserias, DDS, PhD*; Anna Hospital, MD; Luis L. Cabo, MS; Steven A. Symes, PhD; Dennis C. Dirkmaat, PhD |
| 9:45 a.m.    | A40     | Does Aluminum Transfer to Bone When Used as a Packaging Medium? A Test Using X-Ray Fluorescence Spectrometry  
Lyniece Lewis, BS*; Angi M. Christensen, PhD |
| 10:00 a.m.   | A41     | Fluorescence in Heat-Altered Bone Under Ultraviolet Light  
Traci L. Van Deest, PhD* |
| 10:15 a.m.   |         | Break |
|              |         | **Decomposition, Scavenging, and Validating Models in Forensic Taphonomic Research** |
| 10:30 a.m.   | A42     | Effects of Hydrated Lime and Quicklime on the Decay of Human Remains Using Pig Cadavers as Human Body Analogues: Field and Laboratory Experiments  
Eline M.J. Schotsmans, PhD* |
| 10:45 a.m.   | A43     | Assessing How Repetitive Carrion Placement Affects Vulture Scavenging Behavior  
Lauren R. Pharr, MA*; Michael Leitner, PhD; Mary H. Manhein, MA |
| 11:00 a.m.   | A44     | Burning Models: Human vs. Pig in Taphonomic Fatal Fire Modeling  
Elayne J. Pope, PhD*; Mike Whitney |
Angela M. Dautartas, MA*; Lee Meadows Jantz, PhD; Giovanna M. Vidoli, PhD; Dawnie W. Steadman, PhD |
| 11:30 a.m.   |         | Lunch |
|              |         | **Poster Session** |
| 11:30 a.m.   | A46     | Identification of Osteological Remains From the Ironclad U.S.S. Monitor  
David R. Hunt, PhD*; David Krop, MA; Kathleen Sullivan, MAC; Jeremy Jacobs, MS; John Ososky, MS; Charley Potter, BS |
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<td>11:30 a.m.</td>
<td>A47</td>
<td>The Afghan Forensic Science Organization: A Model for Local Capacity Building for Mass Grave Documentation and Preservation in Afghanistan</td>
<td>Zabi Mazoori*, Gillian M. Fowler, MSc*; Dallas Mazoori, JD*; Stefan Schmitt, MS*</td>
</tr>
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<td>11:30 a.m.</td>
<td>A48</td>
<td>Skeletal Markers of Gender Reassignment</td>
<td>Michael W. Warren, PhD; Caley Roberts, BA; Kristina B. Altes, MA*</td>
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<td>11:30 a.m.</td>
<td>A49</td>
<td>Ritualistic Use of Human Skeletal Remains: Is It Forensically Significant?</td>
<td>Ashley Green*; John J. Schultz, PhD; Jan C. Garavaglia, MD</td>
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<tr>
<td>11:30 a.m.</td>
<td>A50</td>
<td>Regression Analysis for Estimation of Stature From Foot Lengths in a North Indian Population</td>
<td>Kewal Krishan, PhD*; Tanuj Kanchan, MD</td>
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<td>11:30 a.m.</td>
<td>A51</td>
<td>Sexual Dimorphism of the Zygomatic Bone in a Southeast Asian Sample</td>
<td>Rebecca J. Wilson-Taylor, PhD*</td>
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<td>11:30 a.m.</td>
<td>A52</td>
<td>Age Estimation in Modern Individuals Between Birth and Fourteen Years of Age Using Measurements of the Knee Joint</td>
<td>Melanie E. Boeyer, BS*; Stephen D. Ousley, PhD</td>
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<td>11:30 a.m.</td>
<td>A53</td>
<td>Femoral Midshaft Shape: An Indicator of Adult Age-at-Death?</td>
<td>Megan E. Ingvoldstad, PhD*; Pierre M.M. Guyomarc'h, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>A54</td>
<td>Body Height Estimation From Femur Measurements in Postmortem Computer Tomography</td>
<td>Sandra Lösch, PhD*; Simon Kramis, MA; Maya Näf, MA; Frank Siegmund, PhD; Fabian Kanz, PhD; Wolf-Dieter Zech, MD</td>
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<tr>
<td>11:30 a.m.</td>
<td>A55</td>
<td>Comparative Performances of Sacral Osteometrical and Geometric Morphometrical Studies Based on Multi-Slice Computed Tomography Explorations to Assess Sexual Dimorphism</td>
<td>Marion Vergnault*; Frederic Savall; Fabrice F. Dedouit; Hervé Rousseau, PhD; Daniel Rouge, MD; Norbert Télmon, PhD, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A56</td>
<td>Sex Estimation Using Discriminate Function Analysis of Non-Metric Cranial Traits: An Inter-Observer Error Study</td>
<td>Janna M. Andronowski, MSc*; Kyle A. McCormick, MA; Michael W. Kenyhercz, MS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A57</td>
<td>Comparing Cranial Morphology in Asian and Hispanic Populations: Exploring Why Misclassification Can Occur When Using Discriminant Function Analysis</td>
<td>Beatrix Dudzik, MA*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A58</td>
<td>Quantification of Frontal Sinus Morphology From Radiographs for Positive Identification</td>
<td>Priyanka Atti, BA*; Carlos J. Zambrano, MS; James D. Pampush, MS</td>
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<td>11:30 a.m.</td>
<td>A59</td>
<td>An Outline Analysis of Ancestry and Sex Differences in Cranial Shape</td>
<td>Rachel E. Murphy, B.A*; Heather M. Garvin, PhD</td>
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<td>11:30 a.m.</td>
<td>A60</td>
<td>Stature Estimation Using the Mandible in a Caucasian Italian Population</td>
<td>Chantal Milani, DMD, MS*; Andrea Evangelista, MS; Gian Luigi Panattoni, MD</td>
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ANTHROPOLOGY

11:30 a.m. - 1:00 p.m.  A61  Testing Inter-Observer Reliability of the Transition Analysis Aging Method on the William M. Bass Forensic Skeletal Collection
Christina L. Fojas, MS*; Jieun Kim, MA*; Jocelyn D. Minsky-Rowland, MA*; Bridget F.B. Algee-Hewitt, PhD

11:30 a.m. - 1:00 p.m.  A62  Obliteration of Sharp Force Trauma Artifact by High Particulate Water Wash
Avery J. Appleton*; R. Christopher O’Brien, PhD

11:30 a.m. - 1:00 p.m.  A63  Estimating the Postmortem Interval: A Validation Study of the Total Body Scoring Method Using Medicolegal Cases From Southeast Texas
Derek A. Boyd, BA*

11:30 a.m. - 1:00 p.m.  A64  Bioreactors as a Method for Examining Environmental Effects of Changes in Bone Biochemistry Over Time
Melissa Dunphy, BS*; Katherine E. Weisensee, PhD; Elena Mikhailova, PhD; Melinda Harman, PhD

11:30 a.m. - 1:00 p.m.  A65  The Effects of Decomposition Upon the Efficacy of Biometrics for Positive Identification
Kelly Sauerwein*; Tiffany B. Saud, MS*; Dawnie W. Steadman, PhD; Chris Boehnen, PhD

11:30 a.m. - 1:00 p.m.  A66  The Extraction of Handedness and Amount of Experience From Sawing Imprints in Bone
David T. Walta, MSc*

11:30 a.m. - 1:00 p.m.  A67  Standardized Descriptive Method for the Anthropological Evaluation of Fractures of the Adult Neurocranium
Jason M. Wiersema, PhD*; Jennifer C. Love, PhD; Sharon M. Derrick, PhD; Deborrah C. Pinto, PhD; Derek A. Boyd, BA

11:30 a.m. - 1:00 p.m.  A68  Identifying Undocumented Border Crossers From the Texas-Mexico Border: A Collaborative Effort
Hailey A. Duecker, BA*; Kate Spradley, PhD

11:30 a.m. - 1:00 p.m.  A69  Surveying a Titan: An Argument for the Presence of Human Remains on the Wreck of the R.M.S. Titanic
Lucas N. Rolleri*; Cheryl A. Johnston, PhD

11:30 a.m. - 1:00 p.m.  A70  Utilizing Geographic Information Systems (GIS) to Analyze Geographic and Demographic Patterns Related to Forensic Case Recovery Locations in Florida
Katharine E. Kolpan, MA*

11:30 a.m. - 1:00 p.m.  A71  The Application of the Sub-Pubic Concavity/Contour for Sexing Subadult Human Innominates
Alexandra R. Klaes, PhD*; Tesa L. Burns*

11:30 a.m. - 1:00 p.m.  A72  Sex Estimation of the Modern Human Pubic Bone Using a 3D Geometric Morphometric Approach
Valda Black, MA*

11:30 a.m. - 1:00 p.m.  A73  Estimating Sex From the Innominate Utilizing New Measurements
Sarah Baumgarten, BA*; Stephen D. Ousley, PhD
11:30 a.m. - 1:00 p.m. A74 Sex Estimation Using Metric Measurements of the Sternum
Megan Chapin, BA*

11:30 a.m. - 1:00 p.m. A75 Skeletal Sex Assessment Utilizing the Fifth Lumbar Vertebra
Sean Y. Carlson-Greer, BA*

11:30 a.m. - 1:00 p.m. A76 Sexual Dimorphism of the Manubrium in a Modern Forensic Sample
Cristina L. Kelbaugh, BS*; Meredith L. Tise, PhD*; John W. Powell III, BS; Erin H. Kimmerle, PhD; Leszek Chrostowski, MD

11:30 a.m. - 1:00 p.m. A77 Feature Analysis of the Pubic Bone for Estimation of Age-at-Death
Julia D. Chmaj, BA*; Kristen Hartnett, PhD

11:30 a.m. - 1:00 p.m. A78 Assessing the Effects of Pregnancy on Aging From the Pubic Symphysis:
Incorporating Living People Into Biological Profile Research by Combining Medical Imaging and Participant Interviews
Janamarie Truesdell, MS*

Reevaluation of the Known, Unknown, and Misunderstood

Moderator: Joseph T. Hefner, PhD
Michigan State University
Dept of Anthropology
East Lansing, MI

Co-Moderator: Felicia S. Wun, BS
Honolulu, HI

1:15 p.m. - 1:30 p.m. A79 McKern’s and Stewart’s “Unknowns”: A Reappraisal of the Individuals Omitted From the “Skeletal Age Changes in Young American Males” Sample
Alexander F. Christensen, PhD*

1:30 p.m. - 1:45 p.m. A80 A Reassessment of McKern’s and Stewart’s Pubic Symphysis Aging Method
Joan E. Baker, PhD*; Alexander F. Christensen, PhD

1:45 p.m. - 2:00 p.m. A81 Estimating Stature When Ancestry is Unknown: What Statistical Methods Work Best?
Ami N. Hatza, MS*; Stephen D. Ousley, PhD; Luis L. Cabo, MS

2:00 p.m. - 2:15 p.m. A82 The Issue of Age Estimation in a Modern Skeletal Population: Are Current Aging Methods Satisfactory for the Elderly?
Annalisa Cappella, BS*; Marco Cammaudo, MA; Elena Arrigoni; Daniele M. Gibelli, PhD; Davide Porta, BS; Cristina Cattaneo, PhD

2:15 p.m. - 2:30 p.m. A83 One Hundred Years Since Martin’s Lehrbuch: Measurement Confusion and DCP 2.0
Stephen D. Ousley, PhD*; Natalie R. Shirley, PhD; Richard Jantz, PhD

2:30 p.m. - 2:45 p.m. A84 Evaluation and Reformation of Osteometric Data in Forensic Anthropology:
The Foundations of DCP 2.0
Lee Meadows Jantz, PhD; Natalie R. Shirley, PhD*; Shauna McNulty, MA; Heli M.K. Maijanen, MA; Stephen D. Ousley, PhD; Richard Jantz, PhD

2:45 p.m. - 3:00 p.m. Break
## Innovations in Age, Sex, and Ancestry Estimation

**Moderator:**  
John J. Schultz, PhD  
University of Central Florida  
Dept of Anthropology  
Orlando, FL  

**Co-Moderator:**  
Jennifer M. Vollner, MS  
East Lansing, MI

| 3:00 p.m. - 3:15 p.m. | A85 | Investigations Into Age-Related Changes in the Human Mandible  
Nicolette Parr, PhD*; Nicholas V. Passalacqua, PhD; Katherine Skorpinski, MA |
|-----------------------|-----|------------------------------------------------------------------|
| 3:15 p.m. - 3:30 p.m. | A86 | Accuracy of Estimating Age From Cervical Vertebrae and Mandibular Molar Maturation  
Helen M. Liversidge, PhD; Scheila Manica* |
| 3:30 p.m. - 3:45 p.m. | A87 | Mitochondrial DNA (mtDNA) Mutations as a New Approach for Age-at-Death Estimation  
Sara C. Zapico, PhD*; Douglas H. Ubelaker, PhD |
| 3:45 p.m. - 4:00 p.m. | A88 | A Test of the Passalacqua Sacral Age-Estimation Method in a Japanese Sample  
Carrie A. Brown, MA* |
| 4:00 p.m. - 4:15 p.m. | A89 | The Effects of Parturition on Pelvic Age Indicators  
Rosanne Bongiovanni, PhD* |
| 4:15 p.m. - 4:30 p.m. | A90 | Sex Estimation From the Vertebral Foramen of the Seven Cervical Vertebrae: An Analysis of Greek and Portuguese Skeletal Populations  
Andrew S. Rozendaal, HBSc*; Tanya R. Peckmann, PhD |
| 4:30 p.m. - 4:45 p.m. | A91 | The Use of Femoral Neck Axis Length to Estimate Sex and Ancestry  
Rebecca Meeusen*; Angi M. Christensen, PhD; Joseph T. Hefner, PhD |
| 4:45 p.m. - 5:00 p.m. | A92 | Morphoscopic Trait Expression Within and Among Hispanic Populations  
Joseph T. Hefner, PhD*; Marin A. Pilloud, PhD; Cullen J. Black, MSc; Bruce E. Anderson, PhD |
| 5:00 p.m. - 5:15 p.m. | A93 | Estimating Ancestry From the Postcranial of Modern South Africans  
Leandi Liebenberg, BSc*; Ericka N. L’Abbe, PhD; Kyra E. Stull, PhD |
| 5:15 p.m. - 5:30 p.m. | A94 | Postcranio metric Assessment of Sexual Dimorphism Among Modern South Africans  
Gabriele C. Kruger, BSc*; Ericka N. L’Abbe, PhD; Kyra E. Stull, PhD |
**Thursday - Session II**

**Multidisciplinary Session: Anthropology II/Criminalistics II — Part I: The Boatwright Sisters Present**

Moderator:  Vincent J. Desiderio, MS  
Co-Moderator:  Gregory E. Berg, PhD  
     JPAC-Central ID Laboratory  
     Joint Base Pearl Harbor-Hickam, HI

8:30 a.m. - 9:00 a.m.  **B101 Contributions of Physical Evidence in Human Identifications**  
Sandra Koch, MS*

9:00 a.m. - 9:30 a.m.  **B102 Pollen Evidence of Diet and Environment From a Nebraska Mummy**  
Marina Milanello do Amaral, MS; Nicole A. Wall, MFS; Karl J. Reinhard, PhD*

9:30 a.m. - 10:00 a.m.  **B103 Recent Applications of Stable Isotope Forensics for Tracking Region-of-Origin and Residence Patterns of Unidentified Individuals**  
Eric J. Bartelink, PhD*; Lesley A. Chesson, MS; Brett J. Tipple, PhD; Gregory E. Berg, PhD

10:00 a.m. - 10:15 a.m.  Break

**Multidisciplinary Session: Anthropology II/Criminalistics II — Part II: Hallie and Annie Translate**

Moderator:  Gregory E. Berg, PhD  
Co-Moderator:  Vincent J. Desiderio, MS  
     JPAC-Central ID Laboratory  
     Joint Base Pearl Harbor-Hickam, HI

10:15 a.m. - 10:45 a.m.  **B104 Lessons Learned From the DNA Analysis of More Than 11,000 Skeletal Samples: More Than 20 Years of Process Improvements**  
Suni M. Edson, MS*; Stephanie R. Ah Sam, MS

10:45 a.m. - 11:15 a.m.  **B105 Modeling 3D Facial Appearance in Relation to Sex, Genetic Ancestry, and Individual Genes Enables Facial Prediction From DNA**  
Arslan Zaidi, MS*; Peter Claes, PhD; Mark D. Shriver, PhD

11:15 a.m. - 12:00 p.m.  **B106 The Identification Process Involving American Citizen (AMCIT) and Undocumented Border Crossers (UBCs): The Pima County Office of the Medical Examiner (PCOME) Experience**  
Bruce E. Anderson, PhD*

12:00 p.m. - 1:00 p.m.  Lunch

*Presenting Author
### Friday

**Trauma and Healing**

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<th>Time</th>
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<th>Title</th>
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<tr>
<td>8:30 a.m. - 8:45 a.m.</td>
<td>A95</td>
<td>An Analysis of Butterfly Fracture Propagation</td>
<td>Angela Khalil, BA*; David Raymond, PhD; Elizabeth A. Miller, PhD</td>
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<tr>
<td>8:45 a.m. - 9:00 a.m.</td>
<td>A96</td>
<td>Fracture Characteristics of Fresh Human Femora Under Controlled Three-Point Bending</td>
<td>Mariyam I. Isa, BS*; Todd W. Fenton, PhD; Trevor S. DeLand, BS; Roger C. Haut, PhD</td>
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<tr>
<td>9:00 a.m. - 9:15 a.m.</td>
<td>A97</td>
<td>Atypical Skull Injuries and the Biomechanical Continuum</td>
<td>Brian F. Spatola, MA*</td>
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<tr>
<td>9:15 a.m. - 9:30 a.m.</td>
<td>A98</td>
<td>A Comparison of Radiographic and Osteological Findings in Suspected Infant Abuse Cases</td>
<td>Heather M. Garvin, PhD*; Steven A. Symes, PhD</td>
</tr>
<tr>
<td>9:30 a.m. - 9:45 a.m.</td>
<td>A99</td>
<td>A Forensic Pathology Tool to Predict Pediatric Skull Fracture Patterns: Part V — Controlled Head Drops Onto Shaped Impact Surfaces</td>
<td>Caitlin C.M. Vogelsberg, MS*; Patrick E. Vaughan, BS; Todd W. Fenton, PhD; Roger C. Haut, PhD</td>
</tr>
<tr>
<td>9:45 a.m. - 10:00 a.m.</td>
<td>A100</td>
<td>Experimental and Computational Validations of the Initiation and Propagation of Cranial Fractures in the Adult Skull</td>
<td>Todd W. Fenton, PhD*; Mariyam I. Isa, BS; Patrick E. Vaughan, BS; Roger C. Haut, PhD</td>
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<tr>
<td>10:00 a.m. - 10:15 a.m.</td>
<td>A101</td>
<td>The Fracture Printing Interface: Development of an Automatic Classification System for Cranial Fracture Patterns</td>
<td>Jennifer M. Vollner, MS*; Serhat Selcuk Bucak, PhD; Todd W. Fenton, PhD; Roger C. Haut, PhD</td>
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<tr>
<td>10:15 a.m. - 10:30 a.m.</td>
<td>A102</td>
<td>Healing Rates of Antemortem Injuries to Bone</td>
<td>Lara E. McCormick, PhD*; Jennifer C. Love, PhD</td>
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<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>A103</td>
<td>Sex Differences in Measures of Bone Remodeling</td>
<td>Victoria M. Dominguez, MA*; Christian Crowder, PhD</td>
</tr>
<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>Break</td>
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New Research and Methods for the Advancement of Human Identification

**Moderator:** Ashley H. McKeown, PhD  
University of Montana  
Dept of Anthropology  
Missoula, MT  
**Co-Moderator:** David Z.C. Hines, MA  
Greensboro, NC

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<tr>
<td>11:00 a.m. -</td>
<td>A104</td>
<td>The Utility of Radiographs of the Proximal Femur in Positive Identifications: Establishing a Standard and Minimum Number of Concordant Points</td>
<td>Ashley B. Maxwell, MA*; Ann H. Ross, PhD; Alicja K. Lanfear, PhD</td>
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<tr>
<td>11:15 a.m. -</td>
<td>A105</td>
<td>Dental Cementum Increment Analysis Can Determine Four Seasons at Death</td>
<td>Vicki Wedel, PhD*; Kenneth P. Hermsen, DDS</td>
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<tr>
<td>11:30 a.m. -</td>
<td>A106</td>
<td>An Updated Validation Test of a Computer-Automated Short-Listing Tool for the Radiographic Identification of Human Remains</td>
<td>Susan Steele D’Alonzo, MA*; Pierre M.M. Guyomarc’h, PhD; John E. Byrd, PhD; Carl N. Stephan, PhD</td>
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<tr>
<td>11:45 a.m. -</td>
<td>A107</td>
<td>Unidentified Border Crosser Deaths in Arizona: Expanding Intra-State Collaborative Efforts in Documentation and Representation</td>
<td>Ashley E. Kendell, MA*; Julie M. Fleischman, MS; Christen C. Eggers, MS; Laura C. Fulginiti, PhD</td>
</tr>
<tr>
<td>12:00 p.m. -</td>
<td>A108</td>
<td>Odontometric Differentiation Between Southwest Hispanics, Native Americans, and European Americans</td>
<td>Donovan Adams, BS*; James Pokines, PhD; Jonathan D. Bethard, PhD</td>
</tr>
<tr>
<td>12:15 p.m. -</td>
<td>A109</td>
<td>The Joint Prisoners of War/Missing In Action (POW/MIA) Accounting Command Solvability and Resolvability Rating Project</td>
<td>Ivett Kovari, PhD*</td>
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<tr>
<td>12:30 p.m. -</td>
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<td>Lunch</td>
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**Application of Theory to Forensic Anthropology**

**Moderator:** Donna C. Boyd, PhD  
Radford University  
Forensic Science Institute  
Radford, VA  
**Co-Moderator:** Charles C. Boyd, PhD  
Radford University  
Dept of Anthropolological Science  
Radford, VA

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<tr>
<td>1:45 p.m. -</td>
<td>A110</td>
<td>Theory in Forensic Anthropology: A Retrospective and Look Forward</td>
<td>Donna C. Boyd, PhD*; Charles C. Boyd, PhD</td>
</tr>
<tr>
<td>2:00 p.m. -</td>
<td>A111</td>
<td>Subjective With a Capital “S”? Issues of Objectivity in Forensic Anthropology</td>
<td>Alyshsa P. Winburn, MA*</td>
</tr>
<tr>
<td>2:15 p.m. -</td>
<td>A112</td>
<td>Context and Cognitive Bias: Informed Applied Science vs. Working in the Blind</td>
<td>Michael W. Warren, PhD*</td>
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</table>
2:30 p.m. - 2:45 p.m. A113 From Blumenbach to Howells: The Slow, Painful Emergence of Theory in Forensic Race Estimation
Richard Jantz, PhD; Stephen D. Ousley, PhD*; Joseph T. Hefner, PhD

2:45 p.m. - 3:00 p.m. A114 Forensic Applications of Isotope Landscapes (“Isoscapes”): A Tool for Predicting Region-of-Origin in Forensic Anthropology Cases
Lesley A. Chesson, MS*; Brett J. Tipple, PhD; James Ehleringer; Eric J. Bartelink, PhD

3:00 p.m. - 3:15 p.m. A115 The Anatomy of Age Estimation
Natalie R. Shirley, PhD*; Beatrix Dudzik, MA

3:15 p.m. - 3:30 p.m. Break

3:30 p.m. - 3:45 p.m. A116 Theory and Histological Methods
Christian Crowder, PhD*; Victoria M. Dominguez, MA

3:45 p.m. - 4:00 p.m. A117 Theoretical Foundation of Child Abuse Recognition
Jennifer C. Love, PhD*; Miriam E. Soto Martinez, MA

4:00 p.m. - 4:15 p.m. A118 Thinking Outside the Box: Theory and Innovation in Sharp Trauma Analysis
John A. Williams, PhD*

4:15 p.m. - 4:30 p.m. A119 Non-Linear Systems Theory and Its Application to the Assessment of Postmortem Interval
Charles C. Boyd, PhD*; William W. Baden, PhD; Donna C. Boyd, PhD

4:30 p.m. - 4:45 p.m. A120 The Forensic Anthropologist as Broker for Interdisciplinary Taphonomic Theory
Daniel J. Wescott, PhD*

4:45 p.m. - 5:00 p.m. A121 Arrows of Influence: The Return Flow of Theory and Method to the Parent Disciplines of Modern Forensic Anthropology
Cheryl A. Johnston, PhD*; John F. Schweikart, MA

5:00 p.m. - 5:30 p.m. Discussion
Douglas H. Ubelaker, PhD

Saturday

New Methods for the Field and the Laboratory — and Lessons Learned Through Time

Moderator: Michael W. Warren, PhD
C.A. Pound Human ID Laboratory
Cancer & Genetics Research Complex
Gainesville, FL

Co-Moderator: Cristina Figueroa-Soto, MA
Knoxville, TN

8:30 a.m. - 8:45 a.m. A122 Strontium Isotope Ratios of Hair for Human Provenancing
Brett J. Tipple, PhD*; Thuan H. Chau, MST; Lesley A. Chesson, MS; James Ehleringer; Christy J. Mancuso, MS; Luciano O. Valenzuela, PhD

*Presenting Author
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<tr>
<td>8:45 a.m.</td>
<td>A123</td>
<td>Refining Hydrogen and Oxygen Isoscapes for the Identification of Human Remains in Mississippi</td>
<td>Monica M. Warner*, Amber M. Plemons, BS; Nicholas P. Herrmann, PhD; Kate L. Henderson, MS</td>
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<tr>
<td>9:00 a.m.</td>
<td>A124</td>
<td>Finding the Graves of the Missing: A Study of Geo-Anthropological Techniques in Bosnia-Herzegovina</td>
<td>Derek Congram, PhD*; Arthur G. Green, MA; Hugh H. Tuller, MA</td>
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<td>9:15 a.m.</td>
<td>A125</td>
<td>Multi-Temporal Remote Sensing of Mass Graves in Temperate Environments</td>
<td>Emily A. Norton, MSc*; Andrew Ford, MSc; Paul Cheetham, MSc</td>
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<tr>
<td>9:30 a.m.</td>
<td>A126</td>
<td>Twenty-Eight Years of Forensic Anthropological Casework in the Northeastern United States: Trends, Patterns, and Lessons Learned</td>
<td>Alexandra R. Klales, PhD*; Sara M. Fredette, BS; Katie Cline, BS; Dennis C. Dirkmaat, PhD</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>A127</td>
<td>Building Sustainable Programs of Recovery and Identification of Human Remains — A Comparative Analysis of Forensic Programs: The Examples of Kosovo and Cyprus</td>
<td>Maria Mikellide, MA*</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>A128</td>
<td>The Impact of Daubert on the Admissibility of Forensic Anthropology Expert Testimony</td>
<td>Kate M. Lesciotto, JD*</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>A129</td>
<td>Getting the Record Straight: Forensic Evidence of the Lurigancho Prison Massacre in 1986</td>
<td>Jose P. Baraybar, MSc*; Franco Mora, BA; Yaleska Martinez, BA; Oscar Loyola, BA</td>
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<tr>
<td>10:30 a.m.</td>
<td>Break</td>
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**New Approaches to Age Estimation and Reconstructing Traumatic Events**

**Moderator:** Derek C. Benedix, PhD  
**Co-Moderator:** Kristina B. Altes, MA

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<td>10:45 a.m.</td>
<td>A130</td>
<td>Need a New Headspace? A Semi-Automated Volumetric Approach for Subadult Age Estimation Using the Spheno-Occipital Synchondrosis</td>
<td>Nicoline Lottering, BS*; Mark D. Barry, MSc; Donna M. MacGregor, MSc; Clair L. Alston, PhD; Laura S. Gregory, PhD</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>A131</td>
<td>Radiographic Age Estimation of the Knee in Young Children</td>
<td>Maureen Schaefer, PhD*; Lucina Hackman, PhD</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>A132</td>
<td>Interpersonal Violence in Undocumented Border Crossers From Southern Arizona Between 2006 and 2013</td>
<td>Cate E. Bird, PhD*; Angela Soler, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A133</td>
<td>Differentiating Peri-Mortem From Postmortem Blunt Force Trauma by Evaluating Fracture Tension Surface Topography Using Geographic Information Systems</td>
<td>Kelsee Hentschel, MA*; Daniel J. Wescott, PhD</td>
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*Presenting Author
11:45 a.m. - 12:00 p.m.  A134  Estimating Skeletal Differences Between Contact and Non-Contact Gunshot Wounds to the Head: The Role of Forensic Anthropologists in Understanding Circumstances of Death  
Maria A. Lopez, BA*; Dawnie W. Steadman, PhD

12:00 p.m. - 12:15 p.m.  A135  Identification of Peri-Mortem Cranial Trauma After Cremation: How Easy Is It?  
Federica Collini*, Francesca Magli, MA; Alessandra Mazzucchi, BSc; Emanuela Sguazza, BSc; Michela Zana, BSc; Alberto Amadasi; Cristina Cattaneo, PhD

12:15 p.m. - 12:30 p.m.  A136  Computerized Reconstruction of Fragmentary Skeletal Remains  
Mohamed Mahfouz, PhD; Emam E. Abdel Fatah, PhD*; Natalie R. Shirley, PhD; Nicholas P. Herrmann, PhD; Ali Mustafa, BS
Wednesday

Poster Session — A Little Bit of This and a Little Bit of That

11:30 a.m. - 1:00 p.m. B1 Screening and Confirmation of Nitramine, Nitroaromatic, and Nitrate Ester Explosives in Soil
Harun Sener, MSc; Beril Anilannert, PhD; Salih Cengiz, PhD*

11:30 a.m. - 1:00 p.m. B2 Raman Microspectroscopy of Body Fluid Traces: Intrinsic Method Selectivity
Igor K. Lednev, PhD*

11:30 a.m. - 1:00 p.m. B3 Individual Identification for Bones More Than 60 Years Old Using Autosomal SNPs on an Affymetrix® Chip
Sohee Cho; Soong Deok Lee, PhD*; Jihyun Lee

11:30 a.m. - 1:00 p.m. B4 Development of Multiplexed Autosomal STR, Y-STR, and mtDNA Systems for Forensic Identification Using Next Generation Sequencing
Lotte Downey, MSc, MBA*; Jaynish Patel, PhD; Spencer Hermanson, BS; Leta Steffen, PhD; Cynthia J. Sprecher, BS; Robert McLaren, PhD; Douglas R. Storts, PhD

11:30 a.m. - 1:00 p.m. B5 Efficiency of Human DNA Isolation and Short Tandem Repeat (STR) Profiling From Burnt Teeth
Sara C. Zapico, PhD*; Joe Adserias, DDS, PhD*; Douglas H. Ubelaker, PhD

11:30 a.m. - 1:00 p.m. B6 Age Estimation in Living Individuals Based on Photographs: Relevance in Cases of Pedopornography
Sindia Alves; Duarte N. Vieira, PhD, MD*; Francisco Corte-Real, PhD; Ricardo Vicente, MD; Eugenia Cunha, PhD

11:30 a.m. - 1:00 p.m. B7 Maximize Information From Your Mixture Samples Using a Combined Autosomal STR and Y-STR Multiplex System
Rohaiyah James, PhD*; Martin Eisenberger, PhD; Patricia Fulmer, PhD; Kristy Lenz, MS; Dawn Rabbach, PhD; Cynthia J. Sprecher, BS; Douglas R. Storts, PhD

11:30 a.m. - 1:00 p.m. B8 Self-Generating Robot Worklists and Complete Sample Traceability Through Laboratory Information Management Systems (LIMS) Integration and Barcodes
Jennifer Duncan, BS; Jenna Dunton, MS; Kathleen M. McKinney, MS; Alexis Meeker, MFS*; Andrea R. Smith, BS; Andrew P. McWhorter, MFS; Tanya Dean, BS; Kristi Wimsatt; Keith Gibson, BS

11:30 a.m. - 1:00 p.m. B9 Obtaining DNA-Short Tandem Repeat (STR) Profiles From Evidentiary Samples With Extremely Limited Amounts of DNA
Alexander Sinelnikov, PhD; Pravatchai W. Boonlayangoor, PhD; Karl Reich, PhD*

11:30 a.m. - 1:00 p.m. B10 Validation and Incorporation of RapidHIT™ Technology Into Routine Forensic DNA Casework
Gray Amick, PhD*

11:30 a.m. - 1:00 p.m. B11 A “Whodunit” Solved Utilizing Mixture Interpretation Software With Quantitative Genotyping
Melissa M. Chila, MS*; Tim Kalafut

*Presenting Author
11:30 a.m. - 1:00 p.m. B12 Database Samples Warranting a Closer Look and Examination of the D8S1179 Locus
Amanda J. Hoffman, MS*; Jason Chute, MSFS

11:30 a.m. - 1:00 p.m. B13 Separation of Epithelial Cell Mixtures Using Fluorescently Labeled Antibodies and Flow Cytometry
Cristina E. Stanciu, BS*; Ye Jin Kwon, BS*; Sarah R. Ingram, BS; Eduardo E. Bustamante, BS; Jamie L. Sturgill, PhD; Sarah J. Seashols, PhD; Tracey Dawson Cruz, PhD; Christopher J. Ehrhardt, PhD

11:30 a.m. - 1:00 p.m. B14 Additional Criteria for Identification of Gasoline in Fire Debris Samples
Jeanet Hendrikse, MSc*

11:30 a.m. - 1:00 p.m. B15 A New Headspace-Mass Spectrometry Method for the Identification of Ignitable Liquids in Fire Debris Analysis
Marta Ferreiro-Gonzalez*, Gerardo Fernandez-Barbero; Jose Angel Alvarez, PhD; Jesus Ayuso, PhD; Miguel Palma, PhD; Carmelo G. Barroso, PhD

11:30 a.m. - 1:00 p.m. B16 The Use of Isotope Dilution Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for Precise and Accurate Determination of Elemental Concentration of Trace Elements in Float Glass Standards (FGS1 and FGS2)
Stefan Becker, PhD*; Marc Duecking; Peter Watzke; Peter Weis

11:30 a.m. - 1:00 p.m. B17 Rapid Identification of Designer Drugs With Nuclear Magnetic Resonance (NMR) Spectroscopy
Faith Fowler*; Ling Huang, PhD

11:30 a.m. - 1:00 p.m. B18 Differentiation of Cosmetic Foundations Using Liquid Chromatography/Tandem Mass Spectrometry
Thomas A. Brettell, PhD; Thomas H. Pritchett, MS; Emily A. Myers, BS*

11:30 a.m. - 1:00 p.m. B19 Latent Fingermarks Revelation on Human Skin With the Lumicyano™ One-Step Fluorescent Revelation Process
Maxime Lemoine*, Thomas Colard, DDS, PhD; Yann Delannoy, MD; Cosimo Prete, MSc; Valéry C. Hedouin, MD, PhD

11:30 a.m. - 1:00 p.m. B20 Characterization of Electrical Tapes by Laser Ablation-Inductively Coupled Plasma/Mass Spectrometry (LA-ICP/MS) and Scanning Electron Microscopy With Energy-Dispersive Spectroscopy (SEM/EDS)
Claudia Martinez, BSc*; Tatiana Trejos, PhD; Yu Cheung, BSc; Melanie Perez; Andria H. Mehlerttter, MSFS; Jose R. Almirall, PhD

11:30 a.m. - 1:00 p.m. B21 Body Fluid Identification by Mass Spectrometry From Sexual Assault Evidence
Kevin M. Legg*, Heather E. Mazzanti, MSFS; Christian G. Westring, PhD; Phillip Danielson, PhD

1:30 a.m. - 1:00 p.m. B22 The Occurrence of Forcibly Removed Hairs in Combs and Hair Brushes
Kimberly Sutton, BS; Anne Kisler-Rao, MS*; Melissa L. Quartarone, BS

11:30 a.m. - 1:00 p.m. B23 Utilization of Commercial Portable Instruments for Screening Hand Swabs for the Presence of Firearms Discharge Residue (FDR): Validation of Commercial IMS and XRF Instruments to Screen for FDR
James Stewart, BS*; Katelyn Bustin, BS; Ryan Dross, BS; Brittany Yeager, BS; Suzanne Bell, PhD

*Presenting Author
11:30 a.m. - 1:00 p.m. B24 The Development of Paper Microfluidic Devices for the Presumptive Determination of Seized Drugs
Jashaun Bottoms; Bruce R. McCord, PhD; Ling Wang*

11:30 a.m. - 1:00 p.m. B25 Utilization of Commercial Portable Instruments for Screening Hand Swabs for the Presence of Firearms Discharge Residue (FDR): Collection Efficiency Using Commercial and In-House Media
James Stewart, BS; Katelyn Bustin, BS; Brittany Yeager, BS; Suzanne Bell, PhD; Ryan Dross, BS*

11:30 a.m. - 1:00 p.m. B26 High-Resolution MS/MS Spectral Library for Synthetic Cannabinoids by Direct Analysis in Real-Time Quadrupole Time-of-Flight Mass Spectrometry
Tyler Torbet*; Jose R. Almirall, PhD

11:30 a.m. - 1:00 p.m. B27 Nanoparticle-Assisted Laser Desorption Ionization of Drugs
Rachel West, BSc*; Stewart Walker, PhD; Paul Kirkbride, PhD

11:30 a.m. - 1:00 p.m. B28 Exploration of the Electrochemical Enhancement of Latent Fingerprints
David Cunningham, PhD*; Connor T. Smith; Courtney N. Miller; Taylor R. Baldwin

11:30 a.m. - 1:00 p.m. B29 Effect of Reusing Swipe Materials for Particle Collection
Jessica L. Staymates, MFS*; Matthew E. Staymates, MS

11:30 a.m. - 1:00 p.m. B30 Development of Paper Microfluidic Devices for the Detection of Organic and Inorganic Gunshot Residue
Kathryn R. Chabaud, BS*; Bruce R. McCord, PhD

11:30 a.m. - 1:00 p.m. B31 New Psychoactive Substances Abused in South Korea: Drug Monitoring on the Seized Materials by National Forensic Service From 2009 to April 2014
Jaemin Lee, DPharm*; Meejung Park; Sanggil Choe; Eunmi Kim, PhD

11:30 a.m. - 1:00 p.m. B32 Gunshot Residue on Evidence Packaging
Mustapha Zein*; Kristina M. McNerney, BS; Jason L. Schroeder, MS, MBA; William M. Davis, PhD; Roger Kahn, PhD

11:30 a.m. - 1:00 p.m. B33 Fourier-Transform Infrared Spectroscopy Investigations of Smokeless Powders
Quashanna Price*; Mary R. Williams, MS; Michael E. Sigman, PhD

11:30 a.m. - 1:00 p.m. B34 Creating a Bayesian Network Using Normalized IBIS Scores of .357 Magnum® and .38 Special Cartridge Cases
Roger Jefferys*; Emily B. Fabyanic*; Eric Law*; Keith B. Morris, PhD*

11:30 a.m. - 1:00 p.m. B35 Weathering and Microbial Degradation of Ignitable Liquids
Jessica H. Kindell, BS*; Mary R. Williams, MS; Michael E. Sigman, PhD

11:30 a.m. - 1:00 p.m. B36 Analysis of Anthraquinone Dyes by Electrospray Ionization Quadrupole-Time-of-Flight Tandem Mass Spectrometry (ESI-QTOF-MS/MS)
Nelson R. Vinueza, PhD*
**Thursday — Session I**

**Hoss and Little Joe Ponder Some Current Criminalistics Issues**

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<th>Time</th>
<th>Session</th>
<th>Title</th>
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<tbody>
<tr>
<td>8:25 a.m.</td>
<td>B37</td>
<td>Expert Witness Testimony and DNA Evidence in South Africa</td>
<td>Antonel Olckers, PhD*</td>
</tr>
<tr>
<td>8:40 a.m.</td>
<td>B38</td>
<td>Forensic DNA Collection at Death Scenes</td>
<td>Balvina Z. Phillips, MS*; Christy Smejkal, MS; Rhonda C. Williams, PhD; Roger Kahn, PhD</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>B39</td>
<td>The Making of the Criminalistics Maestro — On the Skills, Knowledge, and Abilities to Work Proficiently on Non-Routine and Complex Cases</td>
<td>Peter R. De Forest, DCrim*; Patrick Buzzini, PhD; Rebecca E. Bucht, PhD; Carol L. Hunter, BS</td>
</tr>
<tr>
<td>9:20 a.m.</td>
<td>B40</td>
<td>The Failure of Forensic Science Academia to Address Perceived Scientific Shortcomings</td>
<td>Victor W. Weedn, MD, JD*</td>
</tr>
<tr>
<td>9:35 a.m.</td>
<td>B41</td>
<td>Implementing Independent Research Projects in a Graduate Forensic Science Degree Program</td>
<td>Walter F. Rowe, PhD*</td>
</tr>
<tr>
<td>9:50 a.m.</td>
<td>B42</td>
<td>Strengthening Forensic Science in the United States: An Update on National Efforts in Research and Development</td>
<td>Gerald M. LaPorte, MSFS*</td>
</tr>
<tr>
<td>10:20 a.m.</td>
<td></td>
<td>Break</td>
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**The Trasks and Hamiltons Consider More Criminalistics Topics**

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<th>Time</th>
<th>Session</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>10:35 a.m.</td>
<td>B43</td>
<td>Mentorship to Colleague Inspired by Service: An Evolution to a Brother- and Sister-in-Law Forensic Family Relationship</td>
<td>Desiree A. Reid, BS*; Lawrence Quarino, PhD*</td>
</tr>
<tr>
<td>10:50 a.m.</td>
<td>B44</td>
<td>Scientific and Technical Support of Dangerous Mail Investigations</td>
<td>Stephanie L. Smith, BS*; David G Bowers, BS</td>
</tr>
</tbody>
</table>

*Presenting Author
11:05 a.m. - 11:30 a.m. **B45** Use of Lean Six Sigma Methodology to Improve Laboratory Productivity and Reduce Backlog
Stefany E. Harman, MS*; Maureen McCabe, MS; Lynn A. Schneeweis, MS*
Kristen Sullivan; Heather Jamieson, MS; Craig Nolde, BS

11:30 a.m. - 11:45 a.m. **B46** Demystifying the American Board of Criminalistics Examination
David C. Stockwell, BS*; Marie Samples, MS

11:45 a.m. - 12:00 p.m. **B47** A Forensic Odyssey: When Doing the Right Thing Doesn’t Always Lead to the Desired Result or Good Deeds Can Be Punished!
Barry A.J. Fisher, MS, MBA*

12:00 p.m. - 1:00 p.m. Lunch

**Poster Session — Forensic Biology Focus**

11:30 a.m. - 1:00 p.m. **B48** Deconvolution: An Automated Means of Unknown Identification in the Criminalistics Lab
Sarah A. Keeling, MS*

11:30 a.m. - 1:00 p.m. **B49** Chemometrics Applied to Spectral Comparison in 2D Raman Mapping
Gary H. Naisbitt, PhD*; Marcyne Blythe; Benjamin Little; Joshua B. Harris

11:30 a.m. - 1:00 p.m. **B50** Effectiveness of Zar-Pro™ Fluorescent Blood Lifting Strips
Corinne E. Martin, BS*; Peter Massey, MS

11:30 a.m. - 1:00 p.m. **B51** An Analytical Profile of 2-[(2,6-dichlorophenyl)-amino]phenylacetoxyacetic Acid (Aceclofenac)
Michael White, BS*

11:30 a.m. - 1:00 p.m. **B52** Rapid Loop-Mediated Isothermal Amplification (LAMP) of RNA Biomarkers for Forensic Identification of Semen and Saliva
Erin K. Hanson, PhD*; Kelsey Neary, BS; John R. Waldeisen, PhD; Debkishore Mitra, PhD; Ivan K. Dimov, PhD; Martin R. Buoncristiani, MSc; Eva M. Steinberger, PhD; Cristian J. Orrego, PhD; John Ballantyne, PhD

11:30 a.m. - 1:00 p.m. **B53** Determination of Gunshot Residue (GSR) in Vehicle Head Liners Using Scanning Electron Microscope (SEM)
Heather M. Hammond*

11:30 a.m. - 1:00 p.m. **B54** Forensic Examination of Oriented Polymer Films: Polarized Light Examinations of Packaging and Shipping Tapes
Walter F. Rowe, PhD*; Karen Brensinger; BS

11:30 a.m. - 1:00 p.m. **B55** Weight Measurements in the Forensic Chemistry Laboratory: A Surrogate Weight Study
Sandra E. Rodriguez-Cruz, PhD*

11:30 a.m. - 1:00 p.m. **B56** Infrared Microspectroscopy for the Analysis of Nail Polish
Ashley K. Jackson, BS; Monica Joshi-Kumar, PhD*
11:30 a.m. - 1:00 p.m.  B57 Mathematical Modeling of Evaporated Petroleum Distillate Standards
Rebecca J. Brehe, BS*; John W. McIlroy, BS; Ruth Waddell Smith, PhD; Victoria L. McGuffin, PhD

11:30 a.m. - 1:00 p.m.  B58 Use and Detection of Ribosomal Inactivating Proteins (RIPs) as Surrogates for Active Toxins Via Immuno-Precipitation and Matrix-Assisted Laser Desorption-Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF MS)
Jessica M. Goss, MS*; James M. Robertson, PhD; Jason D. Bannan, PhD

11:30 a.m. - 1:00 p.m.  B59 A Static Collection Approach for Target Explosive Analog Odors
Claudia L. Sanchez, BA*; Adhly M. Huertas, BSc; Paola A. Prada, PhD; Kenneth G. Furton, PhD

11:30 a.m. - 1:00 p.m.  B60 Illicit Substance Volatile Organic Compounds (VOCs) Analysis for Canine Detection
Adhly M. Huertas, BSc*; Kenneth G. Furton, PhD

11:30 a.m. - 1:00 p.m.  B61 Using Likelihood Ratios for Source Attribution of Glock® Model 21 Fired Cartridge Cases
Keith B. Morris, PhD*; Catherine L. Hefner

11:30 a.m. - 1:00 p.m.  B62 Gas Chromatography/Mass Spectrometry (GC/MS) Measurement of Gasoline Vapor Absorption on Clothing in a Confined Space
Sara C. Karp, BS; Raymond G. Lenz, BS; Ruth M. Henk, BS; Charles R. Cornett, PhD*

11:30 a.m. - 1:00 p.m.  B63 Trace Chemical Signatures of Calcium Hypochlorite: Implications for the Attribution of Hypergolic Mixtures
Stephanie A. Yocca, BS*; Alicia M. Zimmermann, BS; Stephanie R. Harrold; Monique Jones; Joseph B. McGee Turner, PhD; Sarah C. Rutan, PhD; Christopher J. Ehrhardt, PhD

11:30 a.m. - 1:00 p.m.  B64 Enantiomeric Identification of Pregabalin Via Methylation and Chiral Derivatization, Utilizing Gas Chromatography/Mass Spectrometry (GC/MS)
Mike Hitchcock, MS*; Ioan Marginean, PhD; Peter Nemes, PhD

11:30 a.m. - 1:00 p.m.  B65 Analysis of Cannabinoids Found in Seized Marijuana Using Automated Headspace Solid-Phase Microextraction Coupled With Gas Chromatography/Mass Spectrometry
Jessica Winborn*, Margaret A. Hanson; Luis E. Figueroa; Ashley R. Konarik, MS; Dustin M. James, MBA; Kevin K. Chen, BS; Terra M. Dassau, PhD; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD

11:30 a.m. - 1:00 p.m.  B66 Identifying Emerging Drugs of Abuse
Elizabeth A. Gardner, PhD*

11:30 a.m. - 1:00 p.m.  B67 The Development of New Enzymes for 20-Minute Rapid Direct Amplification of Crime Scene Samples and Its Application in Presumptive DNA Screening
Steven B. Lee, PhD*; George T. Duncan, PhD; Bruce R. McCord, PhD

11:30 a.m. - 1:00 p.m.  B68 Examination of Factors That Affect the Recovery and Analysis of DNA From Spent Cartridge Casings
Rebecca Ray, BS*; Ashley M. Mottar, BS; David R. Foran, PhD
11:30 a.m. - 1:00 p.m.  B69  Maximizing DNA Recovery and Short Tandem Repeat (STR) Data From Spent Cartridge Casings  
Ashley M. Mottar, BS*; David R. Foran, PhD

11:30 a.m. - 1:00 p.m.  B70  Internal Validation and Comparative Analysis of the Promega® PowerPlex® Fusion and the Applied Biosystems® GlobalFiler™ Express Amplification Kits for Direct Amplification  
Betzaida L. Maldonado, BS*; Jessica Skillman, BS; Jennifer L. Zeffer, MS; Laura Kuyper, MSFS; Pamela J. Staton, PhD

11:30 a.m. - 1:00 p.m.  B71  High-Throughput Spermatozoa Detection Using the Proximity Ligation Real-Time PCR (PLiRT-PCR) Method  
Chin Hong Shek, BSc*; Valerie Clermont Beaudoin, BS; Jaclyn Benjamin, BS; Daniele S. Podini, PhD

11:30 a.m. - 1:00 p.m.  B72  Developing a Dynamic Model of the DNA Laboratory Process to Characterize the Sources of Uncertainty in DNA Signal: Applications to Forensic DNA Education, Training, and Validation  
Genevieve Wellner, MS; Kayleigh E. Rowan, BS; Cheng-Tsung Hu, BS; Catherine M. Grigcak, PhD*

11:30 a.m. - 1:00 p.m.  B73  Room Temperature DNA Preservation and Rapid Purification of Decomposing Human Tissue Samples: An Alternative DVI Approach  
Amy E. Sorensen*, Elizabeth Rahman, BS; Cassandra Schield, BS; James L. White, BS; David A. Gangitano, PhD; Sheree R. Hughes-Stamm, PhD

11:30 a.m. - 1:00 p.m.  B74  Further Development of an Short Tandem Repeat (STR) Multiplex Reaction for Teaching and Research Purposes  
Charmaine L. Williams, BS*; Sarah A. Lusk, MSFS; Jason G. Linville, PhD*

11:30 a.m. - 1:00 p.m.  B75  Whole Genome Amplification as a Potential Means for Sample Immortalization  
Valerie Clermont Beaudoin, BS*; Katherine B. Gettings, PhD; Daniele S. Podini, PhD

11:30 a.m. - 1:00 p.m.  B76  Highly Multiplexed Analysis of STRs and SNPs Using Massively Parallel Sequencing: Concordance With Current Methodologies  
Whitney A. Simpson, BS*; Carey P. Davis, MS; Cydne L. Holt, PhD; Tracey Dawson Cruz, PhD; Kathryn Stephens

11:30 a.m. - 1:00 p.m.  B77  Evaluation of a Novel Material, Diomics X-Swab™, for Collection of DNA  
Pamela L. Marshall, PhD*

11:30 a.m. - 1:00 p.m.  B78  Assessing the Forensic Potential of Small Arms Propellant Micromorphometry as an Aid in the Investigation of Improvised Explosive Devices (IEDs): A Pilot Study  
Jack Hietpas, PhD*; Peter J. Diaczuk, BS

11:30 a.m. - 1:00 p.m.  B79  Integration of the QIAcube® Into the Laboratory Workflow for Efficient Processing of Sexual Assault Casework  
Michelle L. Collins Gaines, MSFS*; Cheryl M. Duda, MS

11:30 a.m. - 1:00 p.m.  B80  The Evaluation of the Qubit® 2.0 Fluorometer Quantitation System and Comparison to Real-Time Quantitative PCR  
Lisa Burgee, MSFS*; Miles W. Fisher, HS; Kazufusa C. Okamoto, PhD; Karen Olson, PhD; Roman Aranda, IV, PhD
### White-Light Versus Shortwave-Ultraviolet Illumination for Visualizing Fingerprints Developed With Columnar Thin Films of Alq3
- Stephanie Plazibat, BA*
- Stephen Swiontek, PhD, DSc
- Akhlesh Lakhtakia, PhD
- Reena Roy, PhD

### The Effect of Walking on the Evidentiary Value of Soil Taken From Footwear
- Heather T. Moody*
- Lawrence Quarino, PhD

### Characterization of Solder by Trace Metals Using Atomic Absorption Spectroscopy (AAS)
- Sean T. Block, BS*
- Lindsey A. Welch, PhD

### Surface-Enhanced Raman Spectroscopy for Forensic Analysis of Human Semen
- Jessica Irvine, BS*
- Jennifer Fore, PhD
- Ranjith Premasiri, PhD
- Lawrence Ziegler, PhD
- Amy N. Brodeur, MFS

### An Improved Method for Extraction of DNA From Envelopes
- Quentin T. Gauthier, BS*
- Odile M. Loreille, PhD
- Pamela J. Staton, PhD
- Charla Marshall, PhD

### Pairwise Comparisons as a Means of Validating Iraqi Muslim and Christian Allele Frequency Databases
- Nathaniel D. Adams, BS*
- Salwa J. Al-awadi, PhD
- Majeed A. Sabbah, PhD
- Ashley E. Marshall, PhD
- Carrie Rowland, MSc
- Dan Krane, PhD

### Evaluation of a Modified DNA Extraction Approach for Improved Short Tandem Repeat (STR) Recovery From Severely Degraded Skeletal Elements
- Harrison Redd*
- Charla Marshall, PhD
- Pamela J. Staton, PhD
- Odile M. Loreille, PhD

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**Flopsy, Mopsy, Cottontail, and Peter Explore Trace and Biology**

**Moderator:**  Julie A. Demarest, MSFS  
AFMEO/AFDIL  
Dover AFB, DE

**Co-Moderator:**  William Schneck, MS  
Washington State Patrol  
Crime Laboratory  
Cheney, WA

### What Do You Get When You Mix a Double Helix With a Becke Line?
- A Forensic Family
- Ann Marie Gross, MS*
- Susan Gross, MSFS*

### A Study of the Formation, Collection, and Microscopic Trace Material and Genetic Makeup of Household Dust Specimens
- Nicholas Petraco, MS*
- John Ballantyne, PhD
- Erin K. Hanson, PhD
- Katherine Farash, BS

### Combined Genetic and Micro-Chemical Analysis of Household Dust as a Definitive Trace Identifier of a Room and Its Occupants
- Katherine Farash, BS
- Hayley O’Brien, BS
- Erin K. Hanson, PhD
- Nicholas Petraco, MS
- John Ballantyne, PhD*

### The Influence of Distance, Depth, and Time on Forensic DNA Profiling of Soil Bacteria
- James Hopkins, BA
- Ellen M. Jesmok, BS*
- David R. Foran, PhD
2:05 p.m. - 2:20 p.m.  B92  Bacterial Profiling of Soil Evidentiary Items Using Next Generation Sequencing
Ellen M. Jesmok, BS*; David R. Foran, PhD

2:20 p.m. - 2:35 p.m.  B93  Quantitative Analysis of Botanical DNA by Real-Time PCR for Forensic Discrimination and Identification
Hiromi S. Kikkawa, PhD*; Kouichiro Tsuge, PhD; Ritsuko Sagita, PhD

2:35 p.m. - 2:50 p.m.  Break

The Bradys Weigh in on Mixtures

Moderator: Brendan F. Shea, MS
Fredricksburg, VA

Co-Moderator: Gary J. Molina, BA
Texas DPS Crime Laboratory
Austin, TX

2:50 p.m. - 3:10 p.m.  B94  Variation in DNA Mixture Interpretation: Observations From NIST Interlaboratory Study Results
Michael D. Coble, PhD*; John M. Butler, PhD

3:10 p.m. - 3:30 p.m.  B95  A Large-Scale DNA Mixture Interpretation Study of DNA Examiners: Inter- and Intra-Laboratory Variability
Roman Aranda, IV, PhD; Ivy Onyechi, MS*; Brenda Held; Karen Olson, PhD; Jason J. LeBlanc, PhD; Henry P. Maynard, III, MSFS; Blake Rowe, MS; Richard Tontarski, Jr., MFS

3:30 p.m. - 3:50 p.m.  B96  Exploring the Impact of DNA Template Mass on the Ability to Infer the Number of Contributors Using Three Interpretation Methods
Lauren E. Alfonse, BS; Harish Swaminathan; Desmond S. Lun, PhD; Muriel Medard, ScD; Catherine M. Grgicak, PhD*

3:50 p.m. - 4:05 p.m.  B97  Identification of Contributors in Complex DNA Mixtures Utilizing High-Density SNP Arrays: Influence of Sample Ancestry, Ancestry SNPs, and Reference Population
Brittin McMahon, MS; Thomas J. Cavanagh, MS; Mary L. Clair, BS; Jodi R. Bailey, MS; Lucy A. Davis, BHS; Christiana H. Shoopman, BA; Sandra L. Cloze, PhD*

4:05 p.m. - 4:20 p.m.  B98  The Validation of a Statistical Tool for the Analysis of DNA Mixtures
Dustin Foley, MS*; Michael A. Donley, MS; Mark Powell, MS; Rebecca S. Mikulasovich, MS; Katherine Welch, MSFS; Roger Kahn, PhD

4:20 p.m. - 4:35 p.m.  B99  Development of a Pre-Screening qPCR Mixture Detection Assay Using High-Resolution Melting Curve Analysis of the Short Tandem Repeat (STR) Loci D5S818 and D18S51
Kristiana M. Kuehnert, BS*; Nooli Hong; Sarah J. Seashols, PhD; Todd W. Bille, MS; Steven Weitz, MS; Tracey Dawson Cruz, PhD

4:35 p.m. - 4:50 p.m.  B100  Defining the Limits of Forensic DNA Profile Interpretation: An Assessment of the Information Content Inherent in Complex Mixtures
Clare Marsden, PhD; Norah Rudin, PhD; Keith Inman, MS*; Kirk Lohmueller, PhD

4:50 p.m. - 5:10 p.m.  Discussion
Thursday — Session II

Multidisciplinary Session: Anthropology II/Criminalistics II — Part I: The Boatwright Sisters Present

Moderator: Vincent J. Desiderio, Jr., MS
Lovettsville, VA
Co-Moderator: Gregory E. Berg, PhD
JPAC-Central ID Laboratory
Joint Base Pearl Harbor-Hickam, HI

8:30 a.m. - 9:00 a.m.  B101 Contributions of Physical Evidence in Human Identifications
Sandra Koch, MS*

9:00 a.m. - 9:30 a.m.  B102 Pollen Evidence of Diet and Environment From a Nebraska Mummy
Marina Milanello do Amaral, MS; Nicole A. Wall, MFS; Karl J. Reinhard, PhD*

9:30 a.m. - 10:00 a.m.  B103 Recent Applications of Stable Isotope Forensics for Tracking Region-of-Origin and Residence Patterns of Unidentified Individuals
Eric J. Bartelink, PhD*; Lesley A. Chesson, MS; Brett J. Tipple, PhD; Gregory E. Berg, PhD

10:00 a.m. - 10:15 a.m.  Break

Multidisciplinary Session: Anthropology II/Criminalistics II — Part II: Hallie and Annie Translate

Moderator: Gregory E. Berg, PhD
JPAC-Central ID Laboratory
Joint Base Pearl Harbor-Hickam, HI
Co-Moderator: Vincent J. Desiderio, Jr., MS
Lovettsville, VA

10:15 a.m. - 10:45 a.m.  B104 Lessons Learned From the DNA Analysis of More Than 11,000 Skeletal Samples: More Than 20 Years of Process Improvements
Suni M. Edson, MS*; Stephanie R. Ah Sam, MS

10:45 a.m. - 11:15 a.m.  B105 Modeling 3D Facial Appearance in Relation to Sex, Genetic Ancestry, and Individual Genes Enables Facial Prediction From DNA
Arslan Zaidi, MS*; Peter Claes, PhD; Mark D. Shriver, PhD

11:15 a.m. - 12:00 p.m.  B106 The Identification Process Involving American Citizen (AMCIT) and Undocumented Border Crossers (UBCs): The Pima County Office of the Medical Examiner (PCOME) Experience
Bruce E. Anderson, PhD*

12:00 p.m. - 1:00 p.m.  Lunch

*Presenting Author
### Pugsley and Thing Consider Crime Scenes and Latent Prints

**Moderator:** Jarrad R. Wagner, PhD  
Oklahoma State University-CHS  
Dept of Forensic Science  
Tulsa, OK  
**Co-Moderator:** Dennis C. Hilliard, MS  
RI State Crime Laboratory  
Kingston, RI

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<tr>
<td>1:00 p.m.</td>
<td>B107</td>
<td>A Novel Software-Based Toolset for Latent Print Examination</td>
<td>Donald T. Gantz, PhD*; Daniel Gantz*; Mark A. Walch, MA, MPH; Maria A. Roberts; JoAnn Buscaglia, PhD</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>B108</td>
<td>Fingerprint Identification and Error-Rate Estimation Based on the Congruent Matching Cell (CMC) Method</td>
<td>Wei Chu*; Junfeng J. Song, MS; Melissa K. Taylor, BA; Robert M. Thompson, BS; Johannes A. Soons, PhD</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>B109</td>
<td>Development of Fingerprints From Items Submerged in Fresh Water Over Time</td>
<td>Pamela Class*; Kimberlee S. Moran, MSc; Heather E. Mazzanti, MSFS; Elana Quinones, MS</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>B110</td>
<td>DNA Profile From a Fingerprint Developed With a Columnar Thin Film</td>
<td>Stephanie Plazibat, BA*; Zachary C. Goecker, BS; Stephen Swiontek; Akhlesh Lakhtakia, PhD, DSc; Reena Roy, PhD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>B111</td>
<td>Mobility Empowered and Sustainable AFIS (MESA)</td>
<td>Mark A. Walch, MA, MPH*; Donald T. Gantz, PhD; Daniel Gantz</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>B112</td>
<td>Bloodstain Patterns Associated With Gunshot Wounds — Misconceptions</td>
<td>Peter R. De Forest, D.Crim*; Peter A. Pizzola, PhD; Ralph R. Ristenbatt III, MS; Peter J. Diaczuk, BS</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>B113</td>
<td>The Hunt for Aaron Bassler: A Multidisciplinary Criminalistics Case Study</td>
<td>Deborah R. Stonebarger, BS*</td>
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<td>3:00 p.m.</td>
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<td>Break</td>
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### Jax Explains Firearms, Tool Marks, and GSR to Gemma and Clay

**Moderator:** Tracey M. Ray, BS  
Douglas County Sheriff Office  
Forensic Services Division  
Omaha, NE  
**Co-Moderator:** Steve O’Dell, MSFS, MBA  
Baltimore Police Department  
Crime Laboratory  
Baltimore, MD

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<td>3:15 p.m.</td>
<td>B114</td>
<td>Polymer Replication of Reference Bullets Using Advanced Casting and Metal-Coating Techniques</td>
<td>Thomas B. Renegar, BS*; Xiaoyu A. Zheng, MS; Robert M. Thompson, BS; Theodore V. Vorburger, PhD; Junfeng J. Song, MS; Johannes A. Soons, PhD; James H. Yen, PhD</td>
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3:30 p.m. - 3:45 p.m. B115 Reporting Error Rate for Firearm and Tool Mark Identifications in Forensic Science
Junfeng J. Song, MS*; Theodore V. Vorburger, PhD; Wei Chu*; James H. Yen, PhD; Johannes A. Soons, PhD; Mingsi Tong, PhD*; Xiaoyu A. Zheng, MS; Thomas B. Renegar, BS; Robert M. Thompson, BS*; Rick M. Silver, PhD;

3:45 p.m. - 4:00 p.m. B116 NIST Reference Ballistic Tool Mark Database for Research and Development of Identification Systems and Confidence Limits
Xiaoyu A. Zheng, MS*; Johannes A. Soons, PhD; Robert M. Thompson, BS; Mingsi Tong, PhD

4:00 p.m. - 4:15 p.m. B117 Improved Congruent Matching Cells (CMC) Method for Optical Images Identification of Cartridge Cases
Mingsi Tong, PhD*; Junfeng J. Song, MS; Wei Chu; Robert M. Thompson, BS

4:15 p.m. - 4:30 p.m. B118 Toward a Novel, Fast, and Accurate 3D-Topography Imaging and Analysis System for Firearm Forensics
Ryan Lilien, PhD*; Todd J. Weller, MS; Marcus Brubaker, PhD; Pierre Duez, MS

4:30 p.m. - 4:45 p.m. B119 Evaluating the Gray Scale Response Difference Associated With Bullet Comparisons Using Optical Microscopy
Victoria J. Richards, MS*; David G. Howitt, PhD; Frederic A. Tulleners, MA; Robert B. Kimsey, PhD

4:45 p.m. - 5:00 p.m. B120 Critical Angles for 9mm Parabellum Bullets
Peter J. Diaczuk, BS*; Thomas Kubic, JD, PhD

5:00 p.m. - 5:15 p.m. B121 A Study of the Presence of Gunshot Residue in Pittsburgh Police Stations Using SEM/EDX and LC-MS/MS
Leah Ali, BS*; Kyle Brown; Stephanie J. Wetzel, PhD

5:15 p.m. - 5:30 p.m. B122 Detection of Organic Components of Gunshot Residue (GSR) of Carbon SEM Stubs by Raman Spectroscopy
Karyn Crawford*; Lawrence E. Wayne, BS; Jacobus Swanepoel; Lauren L. Richards-Waugh, PhD

Friday — Session I

Lucy and Ricky Go Around and Around About Biological Screening

Moderator: Maranda L. Michael, MA Indianapolis, IN
Co-Moderator: Christie T. Davis, PhD Helix Analytical, Inc San Francisco, CA

8:25 a.m. - 8:40 a.m. B123 Development of a Spectral Camera for Estimating the Age of Bloodstains in Casework
Gerda Edelman*; Maurice Aalders, MD

8:40 a.m. - 8:55 a.m. B124 DNA Methylation Patterns as Markers in Forensic Investigation
Deborah Silva, MS*; Joana Antunes; Kuppareddi Balamurugan, PhD; George T. Duncan, PhD; Clarice Alho, PhD; Bruce R. McCord, PhD

*Presenting Author
### CRIMINALISTICS

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<tr>
<td>8:55 a.m. - 9:10 a.m.</td>
<td>B125</td>
<td>Effects of Decomposition on the Recoverability of Biological Fluid Evidence</td>
<td>Elena A. Remmelmans, BS*; Donald F. Siwek, PhD; Robin W. Cotton, PhD; Amy N. Brodeur, MFS</td>
</tr>
<tr>
<td>9:10 a.m. - 9:25 a.m.</td>
<td>B126</td>
<td>Transfer of Sperm Cells During the Laundering Process</td>
<td>Alicia Swartz, MS*; Lisa Burgee, MSFS; Elizabeth Richards, PhD</td>
</tr>
<tr>
<td>9:25 a.m. - 9:40 a.m.</td>
<td>B127</td>
<td>High-Resolution Melt Analysis of DNA Methylation Status as a Novel Method for Human Semen Identification</td>
<td>Caitlyn Deppen*; K. Joy Karnas, PhD</td>
</tr>
<tr>
<td>9:40 a.m. - 9:55 a.m.</td>
<td>B128</td>
<td>Persistence of Sperm: What the Literature Really Says</td>
<td>James M. DiFrancesco, MFS*; Elizabeth Richards, PhD; Deborah K. Haller, BS</td>
</tr>
<tr>
<td>9:55 a.m. - 10:15 a.m.</td>
<td>B129</td>
<td>Persistence of DNA: A Case File Review</td>
<td>Deborah K. Haller, BS*; Diana Fleming, MFS*; Elizabeth Richards, PhD; James M. DiFrancesco, MFS; Molly Hall, BS</td>
</tr>
<tr>
<td>10:15 a.m. - 10:30 a.m.</td>
<td></td>
<td>Break</td>
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**Fred, Wilma, and Pebbles Study Skeletal Remains and mtDNA**

**Moderator:** Lisa M. Burdett, MS  
**Co-Moderator:** Suni M. Edson, MS  
**Kansas Bureau of Investigation**  
**Armed Forces DNA ID Lab**  
**Great Bend, KS**  
**Dover AFB, DE**

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<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>B130</td>
<td>Intra-Bone Variation of Recoverable Nuclear and Mitochondrial DNA in Femora</td>
<td>Timothy C. Antinick, BA*; David R. Foran, PhD</td>
</tr>
<tr>
<td>10:45 a.m. - 11:05 a.m.</td>
<td>B131</td>
<td>Effect of Skeletal Sampling Technique on DNA and Elemental Analysis Results</td>
<td>Laura G. Combs, MA*; Vivian Huynh, BS; Teresa D. Golden, PhD; Joseph E. Warren, PhD; Rhonda K. Roby, PhD</td>
</tr>
<tr>
<td>11:05 a.m. - 11:25 a.m.</td>
<td>B132</td>
<td>Development of a Multiplex Quantitative PCR (qPCR) Assay for Simultaneous Quantification of Human Nuclear and Mitochondrial DNA From Forensically Relevant Samples</td>
<td>Brittania J. Bintz, MSc*; Mark R. Wilson, PhD</td>
</tr>
<tr>
<td>11:25 a.m. - 11:40 a.m.</td>
<td>B133</td>
<td>Utility of a Novel and Sensitive DNA Multiplex for Highly Degraded Missing Persons Samples</td>
<td>Dixie Peters, MS*; Hiromi Brown, PhD; Gina M. Pineda, MS; Anne H. Montgomery, MS; Sudhir K. Sinha, PhD; Arlhar J. Eisenberg, PhD</td>
</tr>
<tr>
<td>11:40 a.m. - 12:00 p.m.</td>
<td>B134</td>
<td>Hair and Calcified Tissue DNA Extracts: qPCR-Based Guidelines/Strategies for Streamlined Mitochondrial DNA (mtDNA) Amplification and Improved mtDNA Sequence Recovery</td>
<td>Michael D. Brandhagen, PhD*; Jodi A. Irwin, PhD</td>
</tr>
<tr>
<td>12:00 p.m. - 1:00 p.m.</td>
<td></td>
<td>Lunch</td>
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*Presenting Author*
Michael Drills Fredo About Low-Template DNA and Getting More Information From Samples

Moderator: Janine Kishbaugh, MS
Cedar Crest College
Forensic Science Program
Allentown, PA

Co-Moderator: R. Elizabeth Smith, MFS
McLean, VA

1:00 p.m. - 1:15 p.m. B135 Recovering Touch DNA From Cartridge Casings Using a Method of Tape Lifting
Ting Chi Rebecca Wan, BS; Lauren MacDonald*; Yoelia Perez, BS; Todd W. Bille, MS; Daniele S. Podini, PhD

1:15 p.m. - 1:30 p.m. B136 Evaluation and Optimization of DNA Recovery From Bullet Cartridge Cases
Meghan Troy, MSFS*; Christian G Westring, PhD; Phillip Danielson, PhD; Heather E. Mazzanti, MSFS

1:30 p.m. - 1:45 p.m. B137 Evaluation of a Vacuum-Swab Protocol for Recovering Epithelial Cells From Handled Evidentiary Samples
Kevin J. Piccirilli, BS*; Britton L.F. Morin, MSFS; Jillian C. Fesolovich, MSFS; Heather E. Mazzanti, MSFS

1:45 p.m. - 2:00 p.m. B138 Evaluation of a Novel Approach to Low-Copy Number (LCN) DNA Methodologies for Generation of Short Tandem Repeat (STR) Profiles
Chandra Bagley, BS*; Britton L.F. Morin, MSFS; Christian G Westring, PhD; Phillip Danielson, PhD; Heather E. Mazzanti, MSFS

2:00 p.m. - 2:15 p.m. B139 Use of the Ion PGM™ System for Typing Human Identity Marker Systems
Jennifer D. Churchill, PhD*; Joseph P. Chang, BS; Jianye Ge, PhD; Narasimhan Rajagopalan, MS; Robert Lagacé, BS; Wenchi Liao; Jonathan King, MS; Bruce Budowle, PhD

2:15 p.m. - 2:30 p.m. B140 Increased Ancestry Prediction of the United States Population Using Short Tandem Repeat (STR) Data in Addition to 32 Ancestry-Informative SNPs
Valerie Clermont Beaudoin, BS*; Katherine B. Gettings, PhD; Moses S. Schanfield, PhD; Daniele S. Podini, PhD

2:30 p.m. - 2:45 p.m. Break

Dale, Sr. and Jr. Race to Reflect on Rapid DNA and Efficiency Improvement

Moderator: Joan M. Bienvenue, PhD
University of Virginia
Charlottesville, VA

Co-Moderator: Mary J. Dukes, MS
QLAGEN Inc.
Germantown, MD

2:45 p.m. - 3:00 p.m. B141 Simulating the United Arab Emirates Crime Scene Samples and Generating DNA Profiles From Them Using the RapidHIT™ System
Aamer Alshehhi, BS*; Reena Roy, PhD

*Presenting Author
3:00 p.m. - 3:20 p.m. **B142** Development of a Portable, Laminated Dynamic Solid-Phase DNA Extraction Method on a Rotationally-Driven Platform  
Kimberly Jackson*; Juliane C. Borba, MS; Brian L. Poe, PhD; Emanuel Carrilho, PhD; Roman Aranda IV, PhD; Karen Olson, PhD; Doris Haverstick, PhD; James P. Landers, PhD

3:20 p.m. - 3:35 p.m. **B143** Use of Rapid DNA Systems in Disaster Victim Identification  
Sheila E. Dennis, MS; Yvette Rada, MS*; Desarae L. Harmon, BS; Zoran M. Budimlija, MD, PhD; Grace L. Axler-DiPerte, PhD

3:35 p.m. - 4:00 p.m. **B144** Human Identification in Less Than 45 Minutes: A Rapid and Fully Portable DNA Solution  
Nani M. Grimmer, BS*; Michael N. Parsons, MS; Abigail S. Bathrick, MFS; Katie Kennedy, BS; Donia Slack

4:00 p.m. - 4:20 p.m. **B145** Validated and Straightforward Multiplex PCR Method for High-Quality Analysis of the Expanded CODIS STR Loci Set  
Daniel Müller*; Melanie Breitbach; Stefan Cornelius; Sarah Pakulla-Dickel; Margaretha Koenig; Anke Prochnow, MD; Lars Bochmann, MD; Mario Scherer, PhD; Ralf Peist, MD

4:20 p.m. - 4:40 p.m. **B146** Improving Processing Efficiency for Forensic DNA Samples  
Catherine C. Connin, MS*; Aaron K. LeFebvre, PhD; Robert C. Benjamin, PhD

4:40 p.m. - 5:00 p.m. Discussion

*Friday — Session II*

**Wally and the Beav Are Lectured About Getting Stuck on Trace**

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<tr>
<td>8:15 a.m.</td>
<td>B147</td>
<td>Microtrace to Nanotrace: Extracting Information at Increasingly Smaller Length Scales</td>
<td>Christopher S. Palenik, PhD*; Skip Palenik, BS*</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>B148</td>
<td>The Investigation of Potential Mechanisms for the Formation of Postmortem Hair Root Bands: A Detailed Microscopical and Ultrastructural Analysis</td>
<td>Jack Hietpas, PhD*; JoAnn Buscaglia, PhD; Adam H. Richard, MA; Hilda S. Castillo, PhD; Stephen D. Shaw, MS; Ernest J. Drummond, MS; Joseph Donfack, PhD</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>B149</td>
<td>Analysis and Discrimination of Colored Pressure-Sensitive Tape Backing by Microspectrophotometry</td>
<td>Susan Gross, MSFS*; Josh Jorstad, BA</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>B150</td>
<td>Quantitative Algorithm for Digital Comparison of Torn and Cut Duct Tape</td>
<td>Alicia Alfter, BS*; William Ristenpart, PhD; Frederic A. Tulleners, MA</td>
</tr>
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</table>
9:30 a.m. - 9:45 a.m. B151 Comparisons of Multivariate Preprocessing for Forensic Discrimination of Fibers by UV/Visible Microspectrophotometry
Stephen L. Morgan, PhD*; Nathan Fuenffinger, MS

9:45 a.m. - 10:00 a.m. B152 Development of a Microspectrophotometric Spectrum Database for Comparison of Casework Textile Fiber Samples to Motor Vehicle Interior Fabrics
Rees A. Powell, BSc*; Colin R. Priddis, BS; Peter A. Collins, BSc.; John Coumbaros, PhD

10:00 a.m. - 10:15 a.m. B153 Examination of Statistical Methods for Forensic Analysis of Highly Similar Absorbance Spectra From Textile Fibers
Alejandra Flores*; Michael E. Sigman, PhD; Andres D. Campiglia, PhD

10:15 a.m. - 10:30 a.m. Break

Will and Carlton Talk About Living in a Materials Analysis World

Moderator: Barbara E. Andree, MS
ATF Forensic Science Lab
Walnut Creek, CA

Co-Moderator: Brenda B. Christy, MS
VA Div of Forensic Science
Norfolk, VA

10:30 a.m. - 10:45 a.m. B154 Identification of Artificially Aged Silk at the Molecular Level
McKenzie Floyd, BA*; Christopher M. Rollman, BS; Mehdi Moini, PhD

10:45 a.m. - 11:00 a.m. B155 Frequency of Occurrence of Original Equipment Manufacturer (OEM) Automotive Refinishes Using the Paint Data Query Database
Diana M. Wright, PhD*; Andria H. Mehlretter, MSFS

11:00 a.m. - 11:15 a.m. B156 Forensic Analysis of Hoax Powders Using Morphologically Directed Raman Spectroscopy
Andrew C. Koutrakos, MS*; Brooke W. Kammrath, PhD

11:15 a.m. - 11:30 a.m. B157 Quantitative Mapping of Post-Blast Nitroglycerin Residues on Pipe Bomb Fragments Using Total Vaporization-Solid Phase Microextraction-Gas Chromatography-Mass Spectrometry (TV-SPME-GC/MS)
Dana Bors, BS*; Darren A. Dixon; John V. Goodpaster, PhD

11:30 a.m. - 11:45 a.m. B158 Assessing the Forensic Utility of Particle Morphometry for the Characterization of Aluminum Powders in Explosives
Jack Hietpas, PhD*; Joshua Dettman, PhD; Raleigh Parrott II; JoAnn Buscaglia, PhD

11:45 a.m. - 12:00 p.m. B159 Classifying Aged Explosives to Determine Source
John A. Reffner, PhD*; Pauline E. Leary, PhD

12:00 p.m. - 1:00 p.m. Lunch
J.R. and Bobby Explore Explosives and Fire Debris Season After Season

**Moderator:** Laurel V. Mason, BS  
*Analytical Forensic Associates*  
Lilburn, GA

**Co-Moderator:** Douglas E. Byron, BS  
*Forensic & Scientific Testing*  
Lawrenceville, GA

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<tr>
<td>1:00 p.m.</td>
<td>B160</td>
<td><strong>Smokeless Powders Database at the National Center for Forensic Science</strong></td>
<td>Dana-Marie K. Dennis, BS*; Jessica L. Frisch-Daiello, PhD; Mary R. Williams, MS; Michael E. Sigman, PhD</td>
</tr>
<tr>
<td>1:15 p.m.</td>
<td>B161</td>
<td><strong>Odorant Measurements and New Materials for Canine Training</strong></td>
<td>William A. MacCrehan, PhD*; Matthew E. Staymates, MS; Stephanie Moore, MFS; Michele Schantz, PhD</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>B162</td>
<td><strong>Modern Challenges in Fire Debris Analysis</strong></td>
<td>Jamie M. Baerncopf, MS*; Katherine D. Hutches, PhD</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>B163</td>
<td><strong>The Effects of Burning and Mold Growth on the Analysis of Fire Logs</strong></td>
<td>Kelsey R. Winters, BS*; Michelle Evans, MSFS</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>B164</td>
<td><strong>Investigation of Body Products on Worn Clothing Found at a Fire Scene</strong></td>
<td>Gina Guerrera, BS*; Erika Chen, MS; Michael Valetutti, MS; Brooke W. Kammrath, PhD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>B165</td>
<td><strong>Identification of Triglycerides in Pristine and Degraded Vegetable Oils and Fats in Fire Debris Extracts by Liquid Chromatography/Mass Spectrometry</strong></td>
<td>Craig M. Bryant, MSc*; Josie Warnica, MSc*</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>B166</td>
<td><strong>Analysis of Arson Fire Debris by Low Temperature Dynamic Headspace Adsorption Porous Layer Open Tubular (PLOT) Columns</strong></td>
<td>Thomas J. Bruno, PhD*; Tara M. Lovestead, PhD; Jessica Nichols, BS; Megan Harries, BS</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>B167</td>
<td><strong>Application of Likelihood Ratios in Fire Debris Analysis</strong></td>
<td>Michael E. Sigman, PhD*; Mary R. Williams, MS</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>B168</td>
<td><strong>Detection and Quantitation of Polydimethyl Siloxane Using Liquid Chromatography/Mass Spectrometry</strong></td>
<td>Katherine A. S. Fahnestock, BS*; Derek Dorrien, MS; Anna L. Deakin, MS; Danielle Green, BS</td>
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<tr>
<td>3:15 p.m.</td>
<td></td>
<td><strong>Break</strong></td>
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*Presenting Author
Walter and Skyler Hash Over Drug Chemistry

Moderator: Theresa B. Browning, MFS
Miami, FL

Co-Moderator: Deborah R. Stonebarger, BS
Department of Justice
Redding Laboratory
Redding, CA

3:30 p.m. - 3:45 p.m. B169 2015 Update From the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG)
Sandra E. Rodriguez-Cruz, PhD*

3:45 p.m. - 4:00 p.m. B170 Synthetic Drug Trends in the United States
Emily Dye*

4:00 p.m. - 4:15 p.m. B171 Collection and Analysis of Fire Debris Evidence to Detect Methamphetamine, Pseudoephedrine, and Ignitable Liquids in Fire Scenes at Suspected Clandestine Laboratories
Matthew K. Green*; Raymond Kuk, MS; Jarrad R. Wagner, PhD

4:15 p.m. - 4:30 p.m. B172 TLC-SERS of Controlled Substances: Colloid Optimization and Drug Expansion
Marisia A. Fikiet, BS*; Kasey R. Cargill; Brooke W. Kammrath, PhD

4:30 p.m. - 4:45 p.m. B173 Detection of Drugs in Pharmaceutical Preparations Where Diversion Can Occur by Direct Analysis in Real-Time AccuTOF™-Mass Spectrometry (DART®-MS)
Amanda J. Mohs, BA*; Justin L. Poklis, BS; Carl E. Wolf II, PhD; Michelle R. Peace, PhD; Alphonse Poklis, PhD

4:45 p.m. - 5:00 p.m. B174 Quantification of Controlled Substances in Simulated Samples Using Attenuated Total Reflectance-Fourier Transform Infrared Spectroscopy (ATR-FTIR) and Principal Components Regression
Fanny Chu, BS*; Ruth Waddell Smith, PhD

5:00 p.m. - 5:15 p.m. B175 Solid State Nuclear Magnetic Resonance (NMR) of Street Drugs — The New Presumptive Drug Test
Alexander Valente, BS*; Frank Dorman, PhD; John Frost, PhD; Roscoe Bennett

5:15 p.m. - 5:30 p.m. B176 Elemental Analysis of Presumptive Clandestine Laboratory Evidence Using Laser-Induced Breakdown Spectroscopy (LIBS)
Annessa L. Burnett, BS*; Douglas DeGaetano, MS; Rebecca Wagner, PhD

Criminalistics Section Evening Program
Jonathan and Charlotte Present: You Got DNA From WHAT?

Moderator: Karolyn L. Tontarski, MS
DC Department of Forensic Sciences
Forensic Science Laboratory
Washington, DC

Co-Moderator: Richard Tontarski, MFS
Defense Forensics & Biometrics Agency
Forest Park, GA

7:00 p.m. - 9:00 p.m. B177 You Got DNA From What?
Karolyn L. Tontarski, MS*
Friday — Session III

Multidisciplinary Session Part I: Criminalistics Session III/General/Questioned Documents

Moderator: Charlotte A. Wäcker, MS
City & County of Honolulu
Dept of the Medical Examiner
Honolulu, HI

Co-Moderator: Gulnaz T. Javan, PhD
Alabama State University
Forensic Science Program
Montgomery, AL

1:00 p.m. - 1:20 p.m.  E67  Organization of Scientific Area Committees (OSAC) Forensic Science Standards Activities: Helping Each Other and Stimulating the Future
John Paul Jones II, MBA*

1:20 p.m. - 1:45 p.m.  E68  A Step Toward Likelihood Ratios in Pattern Recognition Disciplines
Simone Gittelsohn*

1:45 p.m. - 2:15 p.m.  E69  Reliability, Validity, Accuracy, and Bias in Forensic Document Examination: An Interdisciplinary Approach to Understanding Forensic Decision-Making Processes and Outcomes
Mara L. Merlino, PhD*; Tierra M. Freeman, PhD*; Veronica B. Dahir, PhD;
Victoria Springer, PhD; Derek L. Hammond, BA; Adrian G. Dyer, PhD; Bryan Found, PhD

2:15 p.m. - 2:30 p.m.  Break

Multidisciplinary Session Part II: Criminalistics Session III/General/Questioned Documents

Moderator: Jean M. Snider
Hope Mills, NC

Co-Moderator: Michael J. Parker, MS
Fayetteville, NC

2:30 p.m. - 2:45 p.m.  E70  Scientific Area Committee for Physics and Pattern Evidence
R. Austin Hicklin, MS*

2:45 p.m. - 3:15 p.m.  E71  Objective and Quantifiable Metrics for the Determination of Latent Print “Suitability”
Henry J. Swofford, MSFS*; Anthony Koertner, BS; Michael J. Salyards, PhD

3:15 p.m. - 3:45 p.m.  E72  Cognitive Profiling of Latent Fingerprint Examiners
Itiel Dror, PhD; Melissa K. Taylor, BA*

3:45 p.m. - 4:30 p.m.  E73  Tips for the Courtroom: How to Get the Most Out of the Expert Witness
Stephanie Domitrovich, JD, PhD*; Jeffrey M. Jentzen, MD*

4:30 p.m. - 5:00 p.m.  Discussion

*Presenting Author
**Saturday - Session I**

**Michael, Jermaine, and Tito Handle Low-Template DNA and a New Technology**

**Moderator:** Kelly L. Knight, MS  
**Co-Moderator:** Linda Razzano, MS  
*OCME  
Dept of Forensic Biology  
New York, NY*

8:30 a.m. - 8:45 a.m.  
**B178**  
**Improving Methods for the Recovery and Analysis of Touch DNA From Fingerprints at Crime Scenes**  
*Jennifer E. Templeton, MSc*; *Adrian Linacre, PhD*

8:45 a.m. - 9:00 a.m.  
**B179**  
**Assessment of Fingerprints for Forensic Short Tandem Repeat (STR) Analysis**  
*Lana Ostojic, MS*

9:00 a.m. - 9:20 a.m.  
**B180**  
**Obtaining STR-Quality Touch DNA From Archived Latent Fingerprints**  
*Aryn M. McClain, BS*; *Marilyn T. Miller, EdD*; *Tracey Dawson Cruz, PhD*

9:20 a.m. - 9:40 a.m.  
**B181**  
**Non-Destructive Biological Evidence Detection and Collection Using the ESDA®-Lite**  
*Dane T. Plaza*; *Jamia J. Mealy, MS*; *Jack N. Lane, BS*; *Michael N. Parsons, MS*; *Abigail S. Bathrick, MFS*; *Donia Slack*

9:40 a.m. - 10:00 a.m.  
**B182**  
**Examination of Rapidly Mutating Y-STR Loci for Increased Resolution of Common Haplotypes Using a Large Multiplex Kit**  
*Michael D. Coble, PhD*; *Katherine B. Gettings, PhD*; *Peter M. Vallone, PhD*

10:00 a.m. - 10:15 a.m.  
**Break**

**Jon and Jordan Block Out Time to Discuss New Technologies and Approaches**

**Moderator:** Amy E. Winters, MSP  
**Co-Moderator:** Christie W. Smith, MS  
*Mississippi Crime Laboratory  
Gulf Coast Regional Laboratory  
Gulfport, MS  
Tennessee Bureau of Investigation  
Memphis, TN*

10:15 a.m. - 10:30 a.m.  
**B183**  
**Inferring Bloodstain Age With a Mobile Spectrometer for Forensic Crime Scene Investigation**  
*Nichole Sutton, BS*; *Michael Harradon, BS*; *Paul C. D’Angio, PhD*; *Michelle R. Mendonca, MFS*; *Kristen L. O’Connor, PhD*; *Zigurts K. Majumdar, PhD*; *Daniele S. Podini, PhD*

10:30 a.m. - 10:50 a.m.  
**B184**  
**Increasing Discrimination of Degraded DNA Using Quantifiler® Trio With the Ion Personal Genome Machine® Sequencer**  
*Joseph P. Chang, BS*; *Allison Holt, PhD*; *Narasimhan Rajagopalan, MS*; *Robert Lagace, BS*; *Sharon Wootton, PhD*; *Sheri Olson, MS*; *Nnamdi Ihuegbu, PhD*; *Reina Langit, MS*; *Chien-Wei Chang, PhD*
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<tr>
<td>10:50 a.m.</td>
<td>B185</td>
<td>Single-Step Photobleaching: A PCR-Free Alternative to Typing Low-Copy Number Templates</td>
<td>Tanya M. Simms, PhD*; Matthew Antonik</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>B186</td>
<td>Development of a Novel DNA Phenotyping System Using Genome-Wide SNP Data</td>
<td>Ellen M. Greytak, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B187</td>
<td>Use of Likelihood Ratios to Unlock Information in Various Short Tandem Repeat (STR) Kits’ Threshold Validation Data Sets With the Use of LabRetriever™</td>
<td>Megan M. Boll, MSFS; Britton L.F. Morin, MSFS; Jillian C. Fesolovich, MSFS*</td>
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<td>11:45 a.m.</td>
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<td>Discussion</td>
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**Saturday — Session II**

Walt, Jr. and Holly Continue the Drug Chemistry Discussion

**Moderator:** Glen P. Jackson, PhD  
West Virginia University  
Dept of Forensic and Investigative Science  
Morgantown, WV

**Co-Moderator:** Robert W. Parsons, MS  
Indian River Crime Laboratory  
Fort Pierce, FL

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<tr>
<td>8:30 a.m.</td>
<td>B188</td>
<td>Fabric Phase Sorptive Extraction Media: A Highly Effective Forensic Sample Collection and Storage Device</td>
<td>Abuzar Kabir, PhD; Rodolfo Mesa*; Kenneth G. Furton, PhD</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>B189</td>
<td>Investigating the Use of Illicit Drug Smoke Aerosol Residues as Recoverable Trace Evidence</td>
<td>Julie L. Bitter, PhD*</td>
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<tr>
<td>9:00 a.m.</td>
<td>B190</td>
<td>Analysis of Phenethylamine Street Drugs for Psychoactive Compounds and Impurities</td>
<td>Maura K. McGonigal*; Philip Smith, PhD; Noelle Elliott, PhD; Frank Dorman, PhD</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>B191</td>
<td>Rapid Drug Identification in the Field Using Direct Analysis in Real Time (DART®) and a Portable Ion Trap Mass Spectrometer</td>
<td>Berk Oktem, PhD; Kenyon M. Evans-Nguyen, PhD*; Hilary Brown; Vladimir Doroshenko, PhD</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>B192</td>
<td>Forensic Analysis of Dipyrrone in Fentanyl Samples</td>
<td>Yuriy Uvayevov, MS*</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>B193</td>
<td>The Utility of Ultra High-Performance Liquid Chromatography With Time-of-Flight Detection for the Identification of Synthetic Cannabinoids: Part I — The Role of the Separation Technique</td>
<td>Ira S. Lurie, PhD*; Ioan Marginean, PhD; Walter F. Rove, PhD</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>B194</td>
<td>The Utility of Ultra High-Performance Liquid Chromatography With Time-of-Flight Detection for the Identification of Synthetic Cannabinoids: Part II — The Role of the Detection Technique</td>
<td>Ioan Marginean, PhD*; Ira S. Lurie, PhD; Walter F. Rove, PhD</td>
</tr>
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</table>
10:15 a.m. - 10:30 a.m.  Break

Shirley Schools Keith, Laurie, and Danny on Drug Chemistry and Instrumental Analysis

Moderator:  Shirley Berends-Montero, PhD
             Den Haag, NETHERLANDS
Co-Moderator:  Micheal A. Villarreal, BA
               Forest Park, GA

10:30 a.m. - 10:45 a.m.  B195  High-Sensitivity Drug Analysis With Optical Isomer Resolution Using Mixed Chiral Selectors
                          Christopher M. Rollman, BS*; Mehdi Moini, PhD

10:45 a.m. - 11:00 a.m.  B196  Determination of the Stoichiometry in the Modified Ferric Hydroxamate Test for Gamma-Hydroxybutyric Acid (GHB)
                          Thomas A. Brettell, PhD*; Karen Lau

11:00 a.m. - 11:20 a.m.  B197  An Analysis of Elemental Content in Various Brands of Cigarette Ash by Atomic Absorption Spectroscopy
                          Kaitlin E. Hafer, BS*; Lindsey A. Welch, PhD

11:20 a.m. - 11:40 a.m.  B198  Forensic Source Attribution Using Stable Isotopes: Hairs to Humans and Insects to Carrion
                          Glen P. Jackson, PhD*; Kateryna Konstantynova; Mayara P.V. De Matos, MS;
                          Rachel M. Mohr, PhD

11:40 a.m. - 12:00 p.m.  B199  From Plants to Projectiles: New Analytical Approaches to the Utility of Direct Analysis in Real Time (DART®) Technology in Forensic Cases
                          Adam B. Hall, PhD*; William Edison, MS; Crystal N. Hart; Rachel Underwood, MSFS;
                          Peter J. Diaczuk, BS; Joseph H. LaPointe, BSc; Brian Musselman, PhD

*Presenting Author
Thursday

Multimedia

Moderator: Walter T. Hart, MBA
San Francisco, CA

Co-Moderator: John E. Sammons, MS
Ona, WV

8:30 a.m. - 8:50 a.m. C1 Large-Scale, Common-Source Identification of Digital Camera Images
Zeno J. Geradts, PhD*; Floris Gisolf, MSFS

8:50 a.m. - 9:10 a.m. C2 Camera-to-Subject Distance and Facial Comparison Examinations
Richard Vorder Bruegge, PhD*

9:10 a.m. - 9:30 a.m. C3 Assessing the Relationship Between Individual Differences and Child Pornography Image Preferences in an Internet Sample of Child Pornography Consumers
Kathryn C. Seigfried-Spellar, PhD*

9:30 a.m. - 9:50 a.m. C4 Forensic Image Comparison of Feet
Zeno J. Geradts, PhD*; Katerina Palla, MFS

9:50 a.m. - 10:10 a.m. C5 Age Estimation of Adolescents and Adults Using the Dimensions of the Eye and Pupil in “Selfie” Photographs
KariAnna Baber, BS, BA*; Robert J. Boggs; Joshua L. Brunty, MS; Ian Levstein, MS; Terry Fenger, PhD

10:10 a.m. - 10:30 a.m. C6 How Accurate is 3D Facial Morphology for Personal Identification?
Petra Urbanová, PhD*; Igor Chalás; Barbora Kozlikova, PhD

10:30 a.m. - 11:00 a.m. Break

Interdisciplinary I

Moderator: Daniel J. Ryan, JD
Pasadena, MD

Co-Moderator: Kathryn C. Seigfried-Spellar, PhD
University of Alabama
Dept of Criminal Justice
Tuscaloosa, AL

11:00 a.m. - 11:20 a.m. C7 Effects of Latent Print Processing on Evidence Prior to Digital Evidence Examination
Charlotte W. Ware, MSFS*; Angela R. Pratt, MFS; Anna R. Fridley, MSIS, MFS

11:20 a.m. - 11:40 a.m. C8 Placing the Suspect “Behind the Keyboard” Through the Application of Handwriting Analysis to MS® Office OneNote® File Content
Thomas L. Murray, MS*; Joseph L. White, MS*

11:40 a.m. - 12:00 p.m. C9 The Role of Fantasy in Investigating Online Predation Cases
Peter R. Stephenson, PhD*; Richard D. Walter, MA

12:00 p.m. - 1:00 p.m. Lunch

*Presenting Author
### Digital & Multimedia Sciences

#### Poster Session

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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>C10</td>
<td>3D Superimposition: A New Technique of Personal Identification</td>
<td>Antonio De Donno, PhD; Sergio Lubelli, PhD*; Valeria Santoro, PhD; Fulvio Lavecchia, PhD; Luigi M. Galantucci, PhD; Francesco Introna, MD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>C11</td>
<td>Online Anonymity: Forensic Analysis of the The Onion Router (Tor) Browser Bundle</td>
<td>Darcie L. Winkler, BS*; Robert J. Boggs; John E. Sammons, MS; Terry Fenger, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>C12</td>
<td>Fingerprint Replication Utilizing Latent Fingerprints for Conducting Forensic Analysis on Mobile Devices With Biometric Security</td>
<td>Joshua D. Sablatura*; Robert McDown, BS*; Jorn Chi-Chung Yu, PhD; Lei Chen, PhD</td>
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#### Interdisciplinary II

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<th>Time</th>
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<tr>
<td>1:00 p.m. - 1:20 p.m.</td>
<td>C13</td>
<td>Implications for Digital Forensics Investigations of the United States 2nd Circuit Ruling Upholding Deletion of Non-Responsive Computer Files: A United States and European Union/Germany Perspective</td>
<td>Donald J. Horowitz, JD; Barbara E. Endicott-Popovsky, PhD*; Aaron Alva; Hellen Schiling, PhD; Carsten Rudolph, PhD; Nicolai Kuntze</td>
</tr>
<tr>
<td>1:20 p.m. - 1:40 p.m.</td>
<td>C14</td>
<td>Modeling Digital Autopsies on Medical Autopsies</td>
<td>Martin S. Olivier, PhD*</td>
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#### Digital

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<tr>
<td>1:40 p.m. - 2:00 p.m.</td>
<td>C15</td>
<td>Exploring Myths in Digital Forensics</td>
<td>Gary C. Kessler, PhD*; Gregory H. Carlton, PhD</td>
</tr>
<tr>
<td>2:00 p.m. - 2:20 p.m.</td>
<td>C16</td>
<td>Forensic Investigation of Crimes Committed by Unmanned Systems</td>
<td>Victor W. Weedn, MD, JD*; Anthony M. Hallett</td>
</tr>
<tr>
<td>2:20 p.m. - 2:40 p.m.</td>
<td>C17</td>
<td>Cloud Computing Forensic Science Challenges</td>
<td>Josiah Dykstra, PhD; Lon Gowen, PhD; Martin Herman, PhD*; Michaela Iorga, PhD; Robert Jackson, MS; Otto Scot Reemelin, MS; Ernesto F. Rojas, MBA; Keyun Ruan, PhD; A. Michael Salim, MS; Ken E. Stavinoha, PhD; Laura P. Taylor, MS; Kenneth R. Zatyko, MS</td>
</tr>
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</table>
2:40 p.m. - 3:00 p.m.  C18  Federated Testing: Shared Test Materials From the Computer Forensics Tool Testing (CFTT) Program at NIST for Digital Forensics Tool Validation and Shared Test Reports
Benjamin R. Livelsberger, MS*; Richard Ayers, MS; Barbara Guttman, BA

3:00 p.m. - 3:20 p.m.  C19  Implications of Valid Data Length (VDL) Slack and the Facts That It Presents
David G. Ferguson, MS*

3:20 p.m. - 3:50 p.m.  Break

3:50 p.m. - 4:10 p.m.  C20  Steganography Analysis: Efficacy and Response Time of Current Steganalysis Software
Jordan B. Green, BS*; Ian Levstein, MS; Robert J. Boggs; Terry Fenger, PhD

4:10 p.m. - 4:30 p.m.  C21  Generating a Corpus of Mobile Forensic Images for Masquerading User Experimentation
Marc Brooks, MS; Justin Grover, MS; Mark D. Guido, MS*; Eric Katz; Jared Ondricek, MS; Marcus Rogers, PhD; Lauren Sharpe, MS

4:30 p.m. - 4:50 p.m.  C22  The Intersection of Physical and Digital Security and Investigations
Walter T. Hart, MBA*

4:50 p.m. - 5:10 p.m.  C23  Memory Forensics: Reliable In-Memory Code Identification Using Relocatable Pointers
Irfan Ahmed, PhD*; Vassil Roussev, PhD; Aisha Ali-Gombe, MS

5:10 p.m. - 5:30 p.m.  C24  Graphic File Carving Tool Testing
Richard Ayers, MS; James R. Lyle, PhD; Jenise Reyes-Rodriguez, BS*
Thursday — Session I

Crash Testing and Crash Worthiness

**Moderator:** Kurt D. Weiss, MS
Automotive Safety Research
Santa Barbara, CA

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<tr>
<td>8:30 a.m.</td>
<td>D1</td>
<td>Vehicle Seat-Adjuster Failure in Collisions: Unreliable Safety Devices</td>
<td>Mark C. Pozzi, MS*; Kenneth J. Saczalski, PhD*</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>D2</td>
<td>Enhanced Injury From Failure of Seats, Seat Belts, and Unsafe Vehicle Interiors</td>
<td>Mark C. Pozzi, MS*; Kenneth J. Saczalski, PhD*; Paul R. Lewis, Jr., MS*; Todd Saczalski, BSMET; Charles Dickerson, BS</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>D3</td>
<td>Motorcycle Helmet Translational and Rotational Head Injury Risk Measures Using H-III Head Impact Tests</td>
<td>Kenneth J. Saczalski, PhD*; Todd Saczalski, BSMET; Joseph L. Burton, MD</td>
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<td>9:35 a.m.</td>
<td>Break</td>
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<tr>
<td>9:55 a.m.</td>
<td>D4</td>
<td>Ejection of Belted Vehicle Occupants Due to Seat and Belt Failure in Rear Impacts</td>
<td>Mark C. Pozzi, MS*; Paul R. Lewis, Jr., MS*; Kenneth J. Saczalski, PhD</td>
</tr>
<tr>
<td>10:10 a.m.</td>
<td>D5</td>
<td>Vehicular Rear-Impact Accident Reconstruction: Validation by Crash, Sled, and Static Testing</td>
<td>Todd Saczalski, BSMET*; Mark C. Pozzi, MS*; Charles Dickerson, BS; Kenneth J. Saczalski, PhD</td>
</tr>
<tr>
<td>10:40 a.m.</td>
<td>D6</td>
<td>Crash Test Verification of Offset Rear-Impact Accident Reconstruction and Crashworthiness-Design Concepts</td>
<td>Robert L. Anderson, MS*; Kenneth J. Saczalski, PhD*; Todd Saczalski, BSMET; Russell L. Anderson, MS; Mark C. Pozzi, MS; Peter E. Baray</td>
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<tr>
<td>11:00 a.m.</td>
<td>Break</td>
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Biomechanics I

**Moderator:** Matthew A. Ivory, BS
Phoenix, AZ

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<tr>
<td>11:15 a.m.</td>
<td>D7</td>
<td>Biomechanical Evaluation of Pediatric-Inflicted Head Trauma</td>
<td>John D. Lloyd, PhD*; William E. Lee III, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>D8</td>
<td>Low-Energy Bone Fractures: Part III</td>
<td>David Pienkowski, PhD*; Hartmut Malluche, MD</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td>D9</td>
<td>Biomechanics of Short Falls in Children</td>
<td>John D. Lloyd, PhD*</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Lunch</td>
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</table>
### Biomechanics II

**Moderator:** David Pienkowski, PhD  
University of Kentucky  
Lexington, KY

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<tr>
<th>Time</th>
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| 1:15 p.m.    | D11     | Biomechanical, Mechanical, and Epidemiologic Characteristics of Low-Speed Rear-Impact Collisions  
Michael Freeman, MD, PhD* |
| 1:35 p.m.    | D12     | Biomechanics of Spinal Injury  
Harold Franck, MSEE, PE*; Darren Franck, MSME |
| 1:50 p.m.    | Break   |                                                                      |
| 2:05 p.m.    | D13     | Biomechanical Evaluation of Head Kinematics During Infant Shaking vs. Pediatric Activities of Daily Living  
John D. Lloyd, PhD*; William E. Lee III, PhD; Edward Willey, MD |
| 2:25 p.m.    | D14     | Relationship of Risk Factors and Specific Tissues at Risk in Rear-Impact Collisions  
Scott D. Rosenquist*; Roger A. Russell, DC; John J. Smith, MSEE, PE; Bradley Boville, BA |
| 2:40 p.m.    | D15     | Biomechanical Evaluation of Shaking Impact Syndrome  
John D. Lloyd, PhD* |
| 3:00 p.m.    | Break   |                                                                      |

### Structural, Accessibility, Safety

**Moderator:** John J. Smith, MSEE, PE  
Parker, CO

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<th>Time</th>
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| 3:15 p.m.    | D16     | Can Barefoot Slip Resistance Be Quantified Using the ASTM F2508 Standard for Tribonometric Testing?  
Marcus P. Besser, PhD*; Mark I. Marpet, PhD; Howard P. Medoff, PhD |
| 3:30 p.m.    | D17     | Additions to Accessibility Standards for Nursing Home and Assisted Living Residents in Toileting and Bathing  
Robert D. Lynch, BA*; Robert N. Mayer, PhD; Jon A. Sanford, MA*; Margaret Calkins, PhD;  
Quinn deMenna, BA*; Ingrid Fraley, BA; Vincent G. Carter, MS; Dennis Hancher, BA;  
Eric S. McRoberts, BA; Tracy Morgan, MSc; Craig Berger, BA |

*Presenting Author*
D18 Evaluating the Impact of Reroofing on Increasing the Risks of Ponding of Water
Daniel M. Honig, PE*

D19 A Test Program to Validate a Step Meter Using Neolite® Test Liner (NTL) as a Test Foot per the ASTM F-2508 Protocol
Mark I. Marpet, PhD, PE; Marcus P. Besser, PhD*; Howard P. Medoff, PhD

D20 Anomalous Initial Readings in Tribometric Testing of Barefoot Subjects
Mark I. Marpet, PhD, PE*; Marcus P. Besser, PhD; Howard P. Medoff, PhD

Thursday — Session II
Weapons and Firearms

Moderator: Sarah V. Hainsworth, PhD
University of Leicester
Dept of Engineering
Leicester, UNITED KINGDOM

D21 Forensic Investigation of a Premature Mortar Explosion That Resulted in the Death and Maiming of Several United States Marines
John Nixon, MBA*

D22 Catastrophic Failures in Firearms and Ammunition Attributed to Propellant Issues, Metal Fatigue, High Pressure, Incorrect Ammunition, and Other Factors
Ronald R. Scott, MA, MS*

D23 Injuries Arising From Glass Drinking Vessels Used in Stabbing and Slashing Attacks
Sarah V. Hainsworth, PhD*; Ryan Pitchford, BEng; Richard W. Earp; Stuart J. Hamilton, MB; Guy N. Ratty, MD

D24 Investigation of “Inert” Artillery Shell Explosions
John Nixon, MBA*

D25 Killing-Power Ranking of Blunt Instruments — Establishment of a Method to Evaluate Human Injury
Shohei Daimaru*; Yasumi Ito, PhD; Yoshiyuki Kagiyama, PhD; Ryotaro Kishida; Kohei Fujigaya

D26 A Study of Batch-to-Batch Handgun Ammunition Propellant Variables and Their Influence on Muzzle-to-Target Distance Determinations
John Nixon, MBA*

Break

Break
# Errors in Forensics — Prelude

**Moderator:** Darren Franck, MSME  
*Advanced Engineering Associates, Inc*  
*Charleston, WV*

11:30 a.m. - 11:55 a.m.  
**D27**  
**Testing of Police Radar**  
*Mark E. Goodson, PE*; *Gary Hartzler, BSME*

11:55 a.m. - 1:00 p.m.  
**Lunch**

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# Multidisciplinary Session: Engineering Sciences Session II/Jurisprudence Session II — Error Rates

**Moderator:** Peter Alexander, PhD  
*Saline, MI*

**Co-Moderator:** Donald E. Shelton, JD, PhD  
*Charleston, WV*

1:00 p.m. - 1:30 p.m.  
**D28**  
**Do I Really Have to Measure Everything Twice in My Forensic Investigation: Isn’t Error Analysis Just Something One Does in Bench Science?**  
*Thomas L. Bohan, PhD, JD*  
*Presenting Author*

1:30 p.m. - 2:00 p.m.  
**D29**  
**Error and Uncertainty in Toxicology and Drug Analysis — Terminology Matters**  
*Suzanne Bell, PhD*  
*Presenting Author*

2:00 p.m. - 2:30 p.m.  
**F24**  
**Communicating Error and Uncertainty in the Courtroom: The Language, Methods, and Psychology of Doubt and Belief**  
*Ted W. Vosk, JD*  
*Presenting Author*

2:30 p.m. - 3:00 p.m.  
**D30**  
**Limitations Associated With the Examination and Presentation of Fingerprint Evidence**  
*Melissa Gische, MFS*  
*Presenting Author*

3:00 p.m. - 3:15 p.m.  
**Break**

3:15 p.m. - 3:45 p.m.  
**F25**  
**Errors in DNA Testing: Lessons Learned — A Retrospective Look**  
*Charlotte J. Word, PhD*  
*Presenting Author*

3:45 p.m. - 4:15 p.m.  
**D31**  
**Certainties and Uncertainties in Accident Reconstruction — How Correcting the Other Side’s Misstatements Affects Jury Verdicts**  
*Peter Alexander, PhD*  
*Presenting Author*

4:15 p.m. - 4:45 p.m.  
**F26**  
**Culture of Infallibility: The Inability of the Criminal Justice System to Concede Scientific Uncertainty**  
*Roderick T. Kennedy, JD*  
*Presenting Author*

4:45 p.m. - 5:00 p.m.  
**Discussion**

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*Presenting Author*
Friday — Session I

Environmental and Chemical

Moderator: Michael C. Hadka, PhD
Downingtown, PA

8:30 a.m. - 8:50 a.m. D32 Forty Years of Squinting — Environmental Forensic Microscopy: 1974–2014
James Millette, PhD*

8:50 a.m. - 9:10 a.m. D33 Look at the Chemistry
James S. Smith, PhD*; Carol A. Erikson, MSPH

9:10 a.m. - 9:30 a.m. D34 Let’s Leave the Junk in the Junk Yard
Michael C. Hadka, PhD*; James S. Smith, PhD

9:30 a.m. - 9:50 a.m. D35 Using SESOIL to Evaluate Contaminant-Release Time Frames in an Environmental Litigation Context
Mark A. Kauffman, Jr., BS*; Charles F. McLane, PhD

9:50 a.m. - 10:05 a.m. Break

10:05 a.m. - 10:25 a.m. D36 Where Is New Jersey Going?
James S. Smith, PhD*; Carol A. Erikson, MSPH

10:25 a.m. - 10:45 a.m. D37 Federal Court Testimony — Tennessee Valley Authority (TVA) Kingston Slurry Ash Spill
Gary R. Brown, BS*

10:45 a.m. - 11:05 a.m. D38 Environmental Forensics Vanity Journals
James S. Smith, PhD*; Carol A. Erikson, MSPH

11:05 a.m. - 1:00 p.m. Lunch

Explosions, Fires, and Electrical Failures

Moderator: Harold Franck, MSEE, PE
Advanced Engineering Associates, Inc
Charleston, WV

1:00 p.m. - 1:20 p.m. D39 Sometimes Electrical Work Results in Damage, Fire, Injury, or Electrocution
Thomas P. Shefchick, BSEE*

1:20 p.m. - 1:40 p.m. D40 Hot Air Balloon Fires, Power Lines, and Product Liability
Helmut G. Brosz, PEng, BScE*; S.B. Addison Larson

1:40 p.m. - 2:00 p.m. D41 Forensic Engineering Investigation of Burn Injuries in a Defective Spa Pool Light Installation
A.K. Aleksander, PhD*
Friday — Session II

Accident Reconstruction

Moderator: Mark C. Pozzi, MS
Sandia Safety Sciences
Edgewood, NM

8:30 a.m. - 9:00 a.m. D46 A Multidisciplinary Analysis of a Complex Motorcycle Fatality
Matthew A. Ivory, BS*; Parris Ward, JD; Michelle R. Hoffman, MS; Carley C. Ward, PhD

9:00 a.m. - 9:20 a.m. D47 Forensic Engineering Critical Site Photogrammetry and the Use of GPS in a Ski Collision Case
A.K. Aleksander, PhD*

9:20 a.m. - 9:40 a.m. D48 Reconstruction of a Seven-Car Pileup: A Case Study
John J. Smith, MSEE, PE*; Bradley Boville, BA

9:40 a.m. - 9:55 a.m. Break

9:55 a.m. - 10:15 a.m. D49 3D Animation Applied to the Analysis of Pre-Impact Visibility Obscurement
Kurt D. Weiss, MS*

10:15 a.m. - 10:35 a.m. D50 Engineering Ethics and an Aircraft Crash
William H. Muzzy III, BS*

10:35 a.m. - 10:55 a.m. D51 Left-of-Center Accident Reconstructions: A Case Study
Darren Franck, MSME*; Harold Franck, MSEE, PE

10:55 a.m. - 11:15 a.m. D52 Sideswipe Evidence for Traffic Accident Reconstruction
Russell L. Anderson, MS*

11:15 a.m. - 1:00 p.m. Lunch
Linguistics and Biometrics

**Moderator:** Roy Crawford, PE, BSME  
RR Crawford Engineering, Inc  
Whitesburg, KY

1:00 p.m. - 1:20 p.m. **D53**  
**WISER: Automatically Classifying Written Statements as True or False**  
Carole E. Chaski, PhD*; Angela Almela, PhD; Gary Holness, PhD; Larry Barksdale, MA

1:20 p.m. - 1:40 p.m. **D54**  
**The Scientific and Legal Status of Forensic Speaker Recognition in the United States**  
James L. Wayman, PhD*; William C. Thompson, PhD, JD; Dorothy J. Glancy, JD

1:40 p.m. - 2:00 p.m. **D55**  
**Comparing Statistical and Machine-Learning Techniques in Author Identification and Verification**  
Carole E. Chaski, PhD*; Gary Holness, PhD; Michael J. Harris, MA

2:00 p.m. - 2:20 p.m. **D56**  
**Comparing Literary, Biometric, and Forensic Approaches to Author Identification**  
Carole E. Chaski, PhD*

2:20 p.m. - 2:45 p.m.  
**Break**

Modeling, Mapping, and Image Analysis

**Moderator:** Robert Dale Lynch, BA  
Haymarket, VA

2:45 p.m. - 3:00 p.m. **D57**  
**Pathway for Integrating All Hazard Preparedness/Risk Management With Command and Control**  
Robert Pentz, BS*; Matthew Begert, BS*; Alan M. Foonberg, MS*; Brendan J. Foran, PhD*; Joseph Han, PhD*; Mark Polak, PhD*; Donald J. Rudy, PhD*; Allyson Yarbrough, PhD*

3:00 p.m. - 3:30 p.m. **D58**  
**The Next Step: Creating and Using the 3D Working Model From Laser Scan Data to Better Seek and Illustrate the Truth**  
Craig T. Fries, BA*

3:30 p.m. - 3:45 p.m.  
**Break**

3:45 p.m. - 4:00 p.m. **D59**  
**You View Your World in 3D — Shouldn’t You View Your Case in the Same Manner?**  
The Use of High-Definition Survey (HDS) Laser Scanning in Forensic Engineering  
Steven M. Schorr, PE*

4:00 p.m. - 4:15 p.m. **D60**  
**The Assessment of Facial Modifications Due to Mimicry: Possible Influences on Personal Identification From Video Surveillance Systems**  
Daniele M. Gibelli, PhD*; Danilo De Angelis, DDS; Pasquale Poppa, BS; Federica Collini; Chiarella Sforza, MD; Cristina Cattaneo, PhD

4:15 p.m. - 4:30 p.m. **D61**  
**Image Processing Application to Anthropological Automatic Characterization in Forensics**  
Alberto L. Geraci*; Giovanna A. Fargione, PhD

*Presenting Author
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  E1  Use of Earprints as Evidence in Spain  
Carlos J. López-Gobernado, PhD*  

11:30 a.m. - 1:00 p.m.  E2  Differentiation of Human, Animal, and Synthetic Hair by ATR-FTIR Spectroscopy  
Jeremy M. Manheim*; Kyle C. Doty, BS; Gregory McLaughlin, MS; Igor K. Lednev, PhD  

11:30 a.m. - 1:00 p.m.  E3  From 20 to 12 in 42 Years: A Case of Inflated Age Estimation and the Role of Forensic Anthropology in Cold Case Investigations  
Katie M. Rubin, MS*; Joshua A. Mott  

11:30 a.m. - 1:00 p.m.  E4  A Study of Morphological and Metric Variations of the Human Ear — Applications in Personal Identification  
Kewal Krishan, PhD*; Tanuj Kanchan, MD; Swati Thakur, MSc  

11:30 a.m. - 1:00 p.m.  E5  A Pilot Study to Evaluate Baseline Quantities of Recovered Touch DNA From a Pistol and Ammunition  
Maher Noureddine, PhD*; James A. Bailey, PhD  

11:30 a.m. - 1:00 p.m.  E6  Mummified Tattoo Rehydration, Photography, and Reconstruction in Cold Case Investigations  
Meredith L. Tise, PhD*; David C. Boyer, MA; Melanie S. Linton-Smith, BA  

11:30 a.m. - 1:00 p.m.  E7  Carbon Monoxide Poisoning: A Study of Five Cases and Literature Review  
Renata S. Razaboni; Ivan D. Miziara, MD, PhD*; Carmen Silvia M. Miziara, MD, PhD; Daniel R. Muñoz, MD, PhD  

11:30 a.m. - 1:00 p.m.  E8  Does Probing Enhance the Decomposition Odor Released From a Gravesite?  
Shari Forbes, PhD*; Amanda Troobnikoff, BSc; Katelynn A. Perrault, BSc; Maiken Ueland, BSc  

11:30 a.m. - 1:00 p.m.  E9  Hammercide: A Bloody Hammer, a Dead Husband, a Bloody Wife, and a Bloody Live-In Friend, as Well as a False Confession  
Steven E. McGibbon, MFS*; Michael Bishop, BS*  

11:30 a.m. - 1:00 p.m.  E10  Development Process Validation for Kinship Analysis Algorithm  
Sharada Vijaychander, MS*  

11:30 a.m. - 1:00 p.m.  E11  An Assessment of the Volatile Organic Compounds (VOCs) of an Agricultural Biothreat Agent, Raffaelea lauricola, and Training Aids for Canine Detection  
Alison Simon*; Julian L. Mendel, MSc; Kenneth G. Furton, PhD; DeEtta Mills, PhD  

11:30 a.m. - 1:00 p.m.  E12  Breaking Glass: Case Review of an In-Hospital Suicide  
Bethany L. Bless, MS*  

11:30 a.m. - 1:00 p.m.  E13  Mortality Directly Related to Abuse Against the Elderly in Brazil: A Reality That Needs to Be Reported  
Carmen Silvia M. Miziara, MD, PhD*; Fabiana I. Carvalho, MD; Thiago Vicla Teixeira, MD; Ivan D. Miziara, MD, PhD
### Thursday

**Moderator:** L. Kathleen Sekula, PhD  
Duquesne University  
Pittsburgh, PA  
Co-Moderator: Keith M. McCullen, MFS  
Black River, NY

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<th>Time</th>
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<tr>
<td>8:30 a.m. -</td>
<td>E15</td>
<td>Effective Use of the Multidisciplinary Approach Is Critical to Solving Contemporary Violent Crime</td>
<td>David J. Zeliff, MFS*; Michael J. Bosse, MFS*</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>E16</td>
<td>Multidisciplinary Approach to a Staged Sexual Assault</td>
<td>Steven Geniuk, MS*; Arthur S. Chancellor, MA*</td>
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<tr>
<td>9:00 a.m.</td>
<td>E17</td>
<td>Do We Have the Right Guy? Connecting One Suspect to Two Brutal Attempted Sexual Assaults in Neighboring Police Jurisdictions</td>
<td>Matthew C. Wietbrock, BS*</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>E18</td>
<td>Obscene Phone Calls: How to Consider This Hands-Off Offense</td>
<td>Ingrid Bertsch, MA; Sebastien Prat, MD*</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>E19</td>
<td>A Ten-Year Study of Suicides From a Rural/Suburban County</td>
<td>Robert J. Bready, MS*; Jennifer C. Bready, PhD*; Dennis J. Chute, MD</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>E20</td>
<td>Investigating Elder Deaths</td>
<td>Julie A. Howe, MBA*; Kim A. Collins, MD*; Patricia King, RN*</td>
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<tr>
<td>10:30 a.m.</td>
<td>Break</td>
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**Moderator:** Gina Londino, MS  
Indianapolis, IN  
Co-Moderator: Gary M. Pusillo, PhD  
Marshalltown, IA

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<tr>
<td>10:30 a.m. -</td>
<td>E21</td>
<td>Bleeding Out: A Case of Mistaken Homicide</td>
<td>Bethany L. Bless, MS*</td>
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<td>10:45 a.m.</td>
<td>E22</td>
<td>The “Spaghetti Bullet”: Difficulties Inherent in the Medicolegal Investigation of Deaths Caused by Non-Standard Ammunition</td>
<td>Lindsey A. Bayer, MS*; Brett E. Harding, MBA; Wendy A. Lavezzi, MD; Barbara C. Wolf, MD</td>
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<td>11:00 a.m.</td>
<td>E23</td>
<td>Blunt Force and Fire — Four Victims and the One Who Got Away: Case Study of a Serial Murderer</td>
<td>Dayle L. Hinman, BS*</td>
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<td>11:15 a.m. - 11:30 a.m.</td>
<td>E24</td>
<td><strong>Case Study: How the Murder of a 4-Year-Old Girl Changed the System</strong></td>
<td>Carrie Costello, BA*</td>
</tr>
<tr>
<td>11:30 a.m. - 11:45 a.m.</td>
<td>E25</td>
<td><strong>Homicide Investigation and Cold Cases: Why Aren’t We Clearing More Cases?</strong></td>
<td>James M. Adcock, PhD*</td>
</tr>
<tr>
<td>11:45 a.m. - 12:00 p.m.</td>
<td>E26</td>
<td><strong>Hyperspectral Remote Sensing: Detection of an Experimental Mass Grave Over Time and at Different Scales in a Temperate Environment</strong></td>
<td>Gabriela Iţimov, BA*; George Leblanc, PhD; Margaret Kalacska, PhD; Tim Moore, PhD</td>
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<tr>
<td>12:00 p.m. - 1:00 p.m.</td>
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<td><strong>Lunch</strong></td>
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**Poster Session**

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<td>11:30 a.m. - 1:00 p.m.</td>
<td>E27</td>
<td><strong>Debunking Three Myths About Rape Victims’ Responses to Their Attacks</strong></td>
<td>Mary Carr, MD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E28</td>
<td><strong>Murder or Accidental Drowning in a Bathtub? Case Studies of Drowning and Non-Aquatic Homicides Staged as Bathtub Drowning Accidents and Suicides</strong></td>
<td>Andrea Zaferes, BA*; Mary E.S. Case, MD*</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E29</td>
<td><strong>Conservation Genetics of Bioko Monkeys</strong></td>
<td>Cynthia R. Zmich, BS*; Heather E. Mazzanti, MSFS; Susan M. Gurney, PhD; Naomi Phillips, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E30</td>
<td><strong>Evaluating Methods for Removing Radioactive Contamination From Traditional Forensic Evidence: Moths</strong></td>
<td>Kelly Daniel*; Rachel Lindvall, BA; Lauren L. Richards-Waugh, PhD; Jason Chute, MSFS; Michael Kristo, PhD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E31</td>
<td><strong>Discrimination of Human and Animal Blood Traces Via Raman Spectroscopy</strong></td>
<td>Kyle C. Doty, BS*; Gregory McLaughlin, MS; Igor K. Lednev, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E32</td>
<td><strong>The Optimization of Spermatozoa Extraction and the Study of the Retention of Spermatozoa on Machine-Washed Clothing</strong></td>
<td>Nicole Gallo, BA*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E33</td>
<td><strong>Adding Value to Your Learning Event</strong></td>
<td>Shirly Berends-Montero, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E34</td>
<td><strong>Comparing Resolution of Analog vs. Digital Imaging Systems in Postmortem Applications</strong></td>
<td>Tania Grygorich, MS; Gerald J. Conlogue, MHS*; Natalie A. Pelletier, MHS; Robert Lombardo, BS</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>E35</td>
<td><strong>Forensic Discrimination of Ballpoint Pen Inks on Documents Using LA-ICP/MS</strong></td>
<td>Jisook Min*</td>
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<td>11:30 a.m.</td>
<td>E36</td>
<td>Comparing 6,000 Consecutively Fired .40 Smith &amp; Wesson® Bullets and Cartridge Cases From a Sig F</td>
<td>Jennifer L. Stephenson, MSFS*, Erich D. Smith, MS*</td>
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<td>auer® P320 Pistol Utilizing 3D Imaging and Objective Comparative Analysis</td>
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<td>11:30 a.m.</td>
<td>E37</td>
<td>Accidental Trauma Mimicking Homicidal Violence</td>
<td>Samuel Prahlow*, Alexander Arendt, BS; Thomas J. Cameron; Joseph A. Prahlow, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E38</td>
<td>Theoretical Evaluation of the Use of the Bloodstain Pooling Method as a Screening Technique</td>
<td>Khudooma S. Al Na’imi, MSc*; Zaina Alhattali, MSc*; Anwar M. Siddiqi, MSc*; Mahmoud B. Al</td>
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<td>Sharairi, BS</td>
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<td>11:30 a.m.</td>
<td>E39</td>
<td>A Bloodstain Pattern Analysis (BPA) Approach to the Shroud of Turin: A Step Forward</td>
<td>Luigi Garlaschelli; Matteo Borrini, PhD*</td>
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**Moderator:** Heather E. Mazzanti, MSFS  
**Co-Moderator:** Phillip M. Curran, MFS

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<tr>
<td>1:00 p.m.</td>
<td>E40</td>
<td>The Flipped Classroom — Turning Your Forensic Education Program Upside-Down</td>
<td>Thomas P. Mauriello, MFS*</td>
</tr>
<tr>
<td>1:15 p.m.</td>
<td>E41</td>
<td>Asylum Seekers Alleging Torture in Their Countries: Evaluation of a French Center</td>
<td>Renaud Clément, MD*</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>E42</td>
<td>Forensic Podiatry — Pedal Evidence in Forensic Casework</td>
<td>Kewal Krishan, PhD*; Tanuj Kanchan, MD; John A. DiMaggio, DPM</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>E43</td>
<td>Analyzing Law Enforcement Officer Reaction Time in Shooting Events Using 3D Computer Animation</td>
<td>Parris Ward, JD*; William J. Lewinski, PhD</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>E44</td>
<td>Death During Restraint: Excited Delirium vs. Positional Asphyxia</td>
<td>Werner U. Spitz, MD*</td>
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<tr>
<td>2:15 p.m.</td>
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<td>Break</td>
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*Presenting Author*
2:30 p.m. - 2:45 p.m. **E45** Spatters Matter: How Bloodstain Evidence Influenced the Police at the Scene and the Prosecutor and Jury in the Courtroom  
*Daniel V. Christman, MS*

2:45 p.m. - 3:00 p.m. **E46** Are We There Yet? The Testing of Unsubmitted Sexual Assault Kits and the Development of New Research Partnerships  
*Heather E. Waltke, MS*; *Gerald M. LaPorte, MSFS*

3:00 p.m. - 3:15 p.m. **E47** Estimation of Human Age Using N-Glycan Profiles From Bloodstains  
*Dragan Primorac, MD, PhD*

3:15 p.m. - 3:30 p.m. **E48** Ambient Ionization Mass Spectrometric Detection of Homemade Explosives in the Presence of Precursors  
*Edward Sisco, MS*; *Thomas P. Forbes, PhD*

3:30 p.m. - 3:45 p.m. **E49** Casework Analysis When Reference Data Aren’t Available for the Observed Insect Species  
*Neal H. Haskell, PhD*

3:45 p.m. - 4:00 p.m. Break

4:00 p.m. - 4:15 p.m. **E50** The Impact of 3D Digitizations and Printed Models of Osteological Trauma When Presented to the Jury as Demonstrative Evidence  
*David A. Errickson, MSc*; *Tim Thompson, PhD*; *Brian W.J. Rankin, MSc*

4:15 p.m. - 4:30 p.m. **E51** Multidimensional Model for Assessing Student Achievement  
*Catherine G. Rushton, MSFS*; *Ronald B. Childress, EdD*

4:30 p.m. - 4:45 p.m. **E52** Creating a Positive Connection for Your Forensic Science Discipline  
*Sandra R. Enslow, BA*; *Catyana R. Skory Falsetti, MFS*

4:45 p.m. - 5:00 p.m. **E53** National Institute of Justice (NIJ) Programs to Support the Forensic Community: Strategies for Stronger Proposals in a Competitive Environment  
*Danielle L. McLeod-Henning, MFS*; *Alan C. Spanbauer, MBA*; *Charles M. Heurich, MFS*
**Friday**

**Moderator:** Mark E. Reynolds, PhD  
**Perth, AUSTRALIA**  
**Co-Moderator:** Tanya L. Marlow, BS  
**US Army Criminal Investigation Command**  
**Fort Myer, VA**

8:30 a.m. - 8:45 a.m.  **E54**  
Collaborative Retrospective Research Study Exploring STR and Y-STR DNA on 1,000 Rape Victims: Implications on Practice  
*Julie L. Valentine, MS*

8:45 a.m. - 9:00 a.m.  **E55**  
Analysis of Suicide Locations in Harris County, Texas  
*Gavin M. Schmidt, BS*

9:00 a.m. - 9:15 a.m.  **E56**  
Multiple Self-Inflicted Gunshot Wounds: Case Series With a Review of Literature  
*Avneesh Gupta, MD*; *Puneet Setia, MD*; *Vera Mendes-Kramer, MA*; *Andrea M. Jackson, BA*; *Kilak Kesha, MD*; *Francisco J. Diaz, MD*

9:15 a.m. - 9:30 a.m.  **E57**  
Determining the Flow Rate Required to Move Submerged Human Remains  
*Jacqueline E. Bleakley, BA*; *Kimberlee S. Moran, MSC*; *Andrea Zaferes, BA*; *Heather E. Mazzanti, MSFS*

9:30 a.m. - 9:45 a.m.  **E58**  
A Model for Recovery: Predicting the Location of Human Remains on WWII Bombardment Aircraft Crash Sites  
*Owen L. O’Leary, MA*

9:45 a.m. - 10:00 a.m.  **E59**  
From the RFK Assassination in Los Angeles to the Wuornos Serial Killings in Florida: A Preliminary Examination of .22 Fired Casings  
*Young Wang*

10:00 a.m. - 10:15 a.m.  **E60**  
A Prospective Analysis of the Outcomes of Violent Prone Restraint Incidents in Policing  
*Darrell L. Ross, PhD*

10:15 a.m. - 10:30 a.m.  **Break**

10:30 a.m. - 10:45 a.m.  **E61**  
Biometric Research Database Catalog: Improving Access to Publicly Available Biometric Data Sets  
*Melissa K. Taylor, BA*; *Shannan Williams, MA*

10:45 a.m. - 11:00 a.m.  **E62**  
Increasing the Precision of Human Geolocation: A City Scale Investigation of Stable Isotopes in Tap Water  
*Momoko Ueda*; *Lynne S. Bell, PhD*
11:00 a.m. - 11:15 a.m. **E63** It's Not Over at the Death  
*Tanya L. Marlow, BS*; *T.L. Williams, MFS*

11:15 a.m. - 11:30 a.m. **E64** Detection of Residual Metal on Bone From Bullet Hole Periphery Using Digital Radiography  
*Brandon Nichols, MD*; *James A. Bailey, PhD*

11:30 a.m. - 11:45 a.m. **E65** Natural Causes of Death in Young Adults in an Urban Medical Examiner’s Office  
*Alaa Alsadi, MD*; *Matthew F. Fox, MD*; *Steven M. White, MD, PhD*

11:45 a.m. - 12:00 p.m. **E66** Body-Found-in-Bathtub Death Investigation  
*Andrea Zaferes, BA*; *Dennis J. Chute, MD*; *Ani N. Hatza, MS*; *Kelly A. Moon*

12:00 p.m. - 1:00 p.m. **Lunch**

**Multidisciplinary Session Part I: Criminalistics Session III/General/Questioned Documents**

**Moderator: Charlotte A. Wacker, MS**  
City & County of Honolulu  
Dept of the Medical Examiner  
Honolulu, HI  
**Co-Moderator: Guhnaz T. Javan, PhD**  
Alabama State University  
Forensic Science Program  
Montgomery, AL

1:00 p.m. - 1:20 p.m. **E67** Organization of Scientific Area Committees (OSAC) Forensic Science Standards Activities: Helping Each Other and Stimulating the Future  
*John Paul Jones II, MBA*

1:20 p.m. - 1:45 p.m. **E68** A Step Toward Likelihood Ratios in Pattern Recognition Disciplines  
*Simone Gittelson*

1:45 p.m. - 2:15 p.m. **E69** Reliability, Validity, Accuracy, and Bias in Forensic Document Examination: An Interdisciplinary Approach to Understanding Forensic Decision-Making Processes and Outcomes  
*Mara L. Merlino, PhD*; *Tierra M. Freeman, PhD*; *Veronica B. Dahir, PhD*; *Victoria Springer, PhD*; *Derek L. Hammond, BA*; *Adrian G. Dyer, PhD*; *Bryan Found, PhD*

2:15 p.m. - 2:30 p.m. **Break**

**Multidisciplinary Session Part II: Criminalistics Session III/General/Questioned Documents**

**Moderator: Jean M. Snider**  
Hope Mills, NC  
**Co-Moderator: Michael J. Parker, MS**  
Fayetteville, NC

2:30 p.m. - 2:45 p.m. **E70** Scientific Area Committee for Physics and Pattern Evidence  
*R. Austin Hicklin, MS*

2:45 p.m. - 3:15 p.m. **E71** Objective and Quantifiable Metrics for the Determination of Latent Print “Suitability”  
*Henry J. Swofford, MSFS*; *Anthony Koermer, BS*; *Michael J. Salyards, PhD*
3:15 p.m. - 3:45 p.m.  E72  Cognitive Profiling of Latent Fingerprint Examiners
  Itiel Dror, PhD; Melissa K. Taylor, BA*

3:45 p.m. - 4:30 p.m.  E73  Tips for the Courtroom: How to Get the Most Out of the Expert Witness
  Stephanie Domitrovich, JD, PhD*; Jeffrey M. Jentzen, MD*

4:30 p.m. - 5:00 p.m.  Discussion
Wednesday
Poster Session

11:30 a.m.  -  1:00 p.m.  F1 A Study of More Than 400 Case Reports Between 2009 and 2014, Completed in the Venice Surveillance Court to Understand, Evaluate, and Investigate the Social Hazards on the Judicial Level of Subjects Convicted of a Crime
Vincenzo Lusa, JD*; Patrizia Trapella, JD*; Luca Massaro, MD*; Sara Raponi*

11:30 a.m.  -  1:00 p.m.  F2 An Evaluation of a Crime During a Trial in View of Cesare Lombroso’s Scientific Insights on the 180th Anniversary of His Birth: The Scientist’s Ideas Representing the Scientific Roots of the Evaluation of a Criminal’s Personality Contained in the Italian Penal Code
Vincenzo Lusa, JD*; Annarita Franza, PhD

11:30 a.m.  -  1:00 p.m.  F3 Can Parents Inherit the Sperm of the Deceased Son? Presentation of an Italian Case and Review of the European Legislation in the Field of Postmortem Fecundation
Simona Napoletano, MD*; Mariantonia Di Sanzo; Francesco P. Busardo, MD; Enrico Marinelli, PhD; Simona Zaami, PhD

11:30 a.m.  -  1:00 p.m.  F4 Moderate Force Blunt Trauma to the Head Leading to Coma: The Role of the Medicolegal Expert in the Assessment of Attempted Murder Charges
Sara Hemied, MD; Alessandro di Luca, MD*; Giorgia Ciancolini; Irene Catarinozzi, MD; Natale Mario di Luca, MD

Thursday — Session I

Moderator:  Gail C. Groy, JD
Co-Moderator:  Alan J. Black, JD

Rizzo & Diersen, SC
Verona, WI

8:30 a.m.  -  9:10 a.m.  F5 The Long Road to Exoneration for Han Tak Lee
John J. Lentini, BA*

9:10 a.m.  -  9:30 a.m.  F6 Misinterpretation of Common Fire Behaviors and Its Effect on Criminal and Civil Litigation
Steven W. Carman, MS*

9:30 a.m.  -  9:50 a.m.  F7 A Perfect Storm Brewing for Fire Investigators in Court
Terry-Dawn Hewitt, LLM*; Wayne J. McKenna, LLB

9:50 a.m.  - 10:10 a.m.  F8 Next-Gen Is Now: Legal Implications and Strategic Preparation for Massively Parallel DNA Sequencing in Forensic Science
Ted R. Hunt, JD*

10:10 a.m.  -  10:30 a.m.  Break
## Session Schedule

### 10:30 a.m. - 10:50 a.m.
**F9** The National Commission on Forensic Science: Status Update
*Nelson Santos, MPA*; *John M. Butler, PhD*

### 10:50 a.m. - 11:10 a.m.
**F10** Leading a Horse to Water and Trying to Make Him Think: The Impact of the 2009 National Academy of Sciences (NAS) Report, *Strengthening Forensic Sciences in the United States—A Path Forward on America's Courts*
*Pamela A.W. King, JD*; *Christine Funk, JD*

### 11:10 a.m. - 11:30 a.m.
**F11** Forensic Science Leaders on the Path Forward
*Sarah Chu, MS*

### 11:30 a.m. - 12:00 p.m.
**F12** Got Forensic Science Standards? — How the Organization of Scientific Area Committees (OSAC) Activities COULD Impact the Courtroom…
*Mark D. Stolorow, MS, MBA*

### 12:00 p.m. - 1:00 p.m.
**Lunch**

### 1:00 p.m. - 1:20 p.m.
**F13** Strawberry Fields Forever: How a 73-Year-Old Birdwatcher Helped Nab a Sexual Predator in Central Park
*Melissa Mourges, JD*; *Martha Bashford, JD*

### 1:20 p.m. - 1:40 p.m.
**F14** Mental Maps: Why You Should Worry
*Katherine Ramsland, PhD*

### 1:40 p.m. - 2:00 p.m.
**F15** Three Shots to the Head: A Case Study of a Murder Prosecution in Indiana
*Christine Haskell, JD*

### 2:00 p.m. - 2:20 p.m.
**F16** How an Innocent Person’s DNA Turned Up at a Murder Scene: Case Study of Lukis Anderson
*Kelley Kulick, JD*

### 2:20 p.m. - 2:40 p.m.
**F17** Crime Scene Investigator: Assessment of Expert Credentials
*Kevin J. Parmelee, MPA*

### 2:40 p.m. - 3:00 p.m.
**Break**

*Presenting Author*
Moderator: Theodore F. Shults, JD
Durham, NC

Max M. Houck, PhD*

3:20 p.m. - 3:40 p.m.  F19  LEGLER: LEGal Linguistic Evidence Rulings and Forensic Linguistic Evidence
Carole E. Chaski, PhD*; Harry L. Miles, JD*; Aaron Alva; Alexis I. Raykhel, MA

3:40 p.m. - 4:00 p.m.  F20  Trust — But Verify: The Reliability of Radiograph Techniques in the Courtroom
Jeffrey M. Jentzen, MD*

4:00 p.m. - 4:20 p.m.  F21  Is the Medical Examiner's or Coroner's Official Cause of Death the Last Word?
Glenn G. Hardin, MPH*

4:20 p.m. - 4:40 p.m.  F22  Forensic Field Testing: Curse or Cure?
Vincent J. Desiderio, Jr., MS*

4:40 p.m. - 5:00 p.m.  F23  Technical Investigations Not Repeatable in the Italian Code of Criminal Procedure: The Guaranteed Anticipated Contradictory of the Defense
Vincenzo Maria Bafundi, JD; Michele Vaira, JD*

**Thursday — Session II**

Multidisciplinary Session: Engineering Sciences Session II/Jurisprudence Session II — Error Rates

Moderator: Peter Alexander, PhD
Aurora, CO

Co-Moderator: Donald E. Shelton, JD, PhD
Saline, MI

1:00 p.m. - 1:30 p.m.  D28  Do I Really Have to Measure Everything Twice in My Forensic Investigation: Isn't Error Analysis Just Something One Does in Bench Science?
Thomas L. Bohan, PhD, JD*

1:30 p.m. - 2:00 p.m.  D29  Error and Uncertainty in Toxicology and Drug Analysis — Terminology Matters
Suzanne Bell, PhD*

2:00 p.m. - 2:30 p.m.  F24  Communicating Error and Uncertainty in the Courtroom: The Language, Methods, and Psychology of Doubt and Belief
Ted W. Vosk, JD*

2:30 p.m. - 3:00 p.m.  D30  Limitations Associated With the Examination and Presentation of Fingerprint Evidence
Melissa Gisch, MFS*

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 3:45 p.m.  F25  Errors in DNA Testing: Lessons Learned — A Retrospective Look
Charlotte J. Word, PhD*

3:45 p.m. - 4:15 p.m.  D31  Certainties and Uncertainties in Accident Reconstruction — How Correcting the Other Side's Misstatements Affects Jury Verdicts
Peter Alexander, PhD*
Friday

**Moderator:** Maxwell C. Fabricant, JD
*The Innocence Project*
New York, NY

8:30 a.m. - 9:10 a.m.  **F27**  Lost and Gone Forever — Jeopardized Prosecutions and Denial of Due Process
*Peter R. De Forest, DCrim*; *James M. Doyle, LLM; Gregory B. Matheson, BS; Rebecca E. Bucht, PhD; John J. Lentini, BA*

9:10 a.m. - 9:30 a.m.  **F28**  Legal Update: Recent Court Decisions Declaring Testimony About Case Reviews Performed by Non-Testifying Experts to Be Inadmissible
*Andrew Sulner, MSFS, JD*

9:30 a.m. - 9:45 a.m.  **F29**  Reliability, Validity, Accuracy, and Bias in Forensic Document Examination: Results From an Interdisciplinary Study of Questioned/Known Signature-Comparison Tasks
*Mara L. Merlino, PhD*; *Tierra M. Freeman, PhD*; *Veronica B. Dahir, PhD; Victoria Springer, PhD; Derek L. Hammond, BA; Adrian G. Dyer, PhD; Bryan Found, PhD*

9:45 a.m. - 10:00 a.m.  **F30**  Prosecutorial Misconduct and Breaches in the Brady Doctrine
*David M. Benjamin, PhD*

10:00 a.m. - 10:15 a.m.  **F31**  Ethics in the Study of Forensic Science: Can Ethics Be Taught?
*Linda L. Chezem, JD*

10:15 a.m. - 10:30 a.m.  **Break**

**Moderator:** Justin J. McShane, JD
*Harrisburg, PA*

10:30 a.m. - 10:45 a.m.  **F32**  Shaken Baby Syndrome: Current Evidence of a Pathological Entity
*Jeffrey M. Jentzen, MD*; *Carl J. Schmidt, MD*

10:45 a.m. - 11:00 a.m.  **F33**  Depraved Indifference — Murder of a Child in New York: Are Moms Getting Away With Murder?
*Kerry J. O’Connell, JD*

11:00 a.m. - 11:15 a.m.  **F34**  Child Psychological Abuse: Legal and Clinical Implications
*Stephanie Domitrovich, JD, PhD*; *William Bernet, MD*
<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<th>Presenters</th>
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<tr>
<td>11:45 a.m.</td>
<td>F35</td>
<td>Hoarding Disorder: Whose Problem Is It Anyway?</td>
<td>James P. Cho, MD*; Scott Bresler, PhD*</td>
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<td>12:00 p.m.</td>
<td>Lunch</td>
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<td>1:00 p.m.</td>
<td>F36</td>
<td>Why DNA Interpretation Has Become More Challenging in Recent Years</td>
<td>John M. Butler, PhD*</td>
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<td>1:20 p.m.</td>
<td>F37</td>
<td>Who and What: Providing Context to a DNA Profile</td>
<td>John Ballantyne, PhD*; Erin K. Hanson, PhD</td>
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<td>1:40 p.m.</td>
<td>F38</td>
<td>Biological Evidence Storage and Disposition: A Discussion of Legal</td>
<td>Shannan Williams, MA*</td>
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<td>Implications, Trends, and Policy Recommendations</td>
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<tr>
<td>2:00 p.m.</td>
<td>F39</td>
<td>DNA Typing: Controls and Validation Updates to Support Current Testing</td>
<td>Christie T. Davis, PhD*</td>
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<td>2:20 p.m.</td>
<td>Break</td>
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<td>2:30 p.m.</td>
<td>F40</td>
<td>The Discovery Motion for “Scientific Stuff”: Don’t Expect to Get it,</td>
<td>Joseph P. Bono, MA*; Ken Williams, MS, JD</td>
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<td>Find It, or Recognize It (Even if You Do Get It) If You Have No Idea</td>
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<td>What You’re Looking For!</td>
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<td>3:00 p.m.</td>
<td>F41</td>
<td>It’s My Toy and You Can’t Play With It: Defense Counsel Problems</td>
<td>Alissa L. Bjerkhoel, JD*</td>
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<td>With Access to CODIS</td>
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<td>3:20 p.m.</td>
<td>F42</td>
<td>“In God We Trust, All Others We Cross-Examine”: Cross-Examination</td>
<td>Nicole Kubista, JD*; Rebecca A. Waxse, JD</td>
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<td>in DNA Mixture Cases</td>
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<td>3:40 p.m.</td>
<td>F43</td>
<td>Interpreting Gobbledygook — What Lawyers and Forensic Scientists Can</td>
<td>Nicole Kubista, JD; Rebecca A. Waxse, JD*</td>
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<td>Do to Communicate Clearly About Scientific Evidence to a Jury</td>
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*Presenting Author
4:00 p.m. - 4:20 p.m. F44 Development of Small-Group Forensic Counsel in Greater Minnesota: Forensic Case Review in the Boonies
   Gregory B. Davis, JD*; Carly S. Vosacek, JD*

4:20 p.m. - 4:40 p.m. F45 In or Out? What is the Threshold for Admissibility?
   Julie Maxwell, JD*

4:40 p.m. - 5:00 p.m. F46 How a Grant Manager Can Allow Scientists to be Scientists
   Lindsey E. Saunders, BS*

Saturday

Moderator: Anne C. Petty, JD
Chicago, IL

Co-Moderator: Cynthia L. Evenson, JD
Duluth, MN

8:30 a.m. - 8:50 a.m. F47 The Validity of Enzymatic Assay for Blood Alcohol Content (BAC) Determinations
   Josh D. Lee, JD*; Justin J. McShane, JD*

8:50 a.m. - 9:10 a.m. F48 Driving Under the Influence of Drugs in Florida
   Nicholas B. Tiscione, MS*; Xiaoqin Shan, PhD; Dustin Tate Yeatman, MS

9:10 a.m. - 9:30 a.m. F49 Evaluating Forensic Evidence in Drug Impairment Cases: Pitfalls and Complexities of Testimony by Non-Medical Witnesses
   Jeremy C. Brehmer, JD*; Josh D. Lee, JD*

9:30 a.m. - 9:50 a.m. F50 Forensic Sciences as a Contributor to Miscarriages of Justice in Western Europe
   Joelle V. Vuille, PhD*

9:50 a.m. - 10:10 a.m. F51 Defending Veterans: Teaching Juries the True Costs of War, Post-Traumatic Stress Disorder (PTSD), Adrenaline Addiction, and Deadly Drug Cocktails
   Jose A. Baez, JD*; Donald E. Shelton, JD, PhD

10:10 a.m. - 10:25 a.m. Break

Moderator: Jeremy C. Brehmer, JD
Middlebrook & Brehmer, LLP
Bakersfield, CA

10:25 a.m. - 10:45 a.m. F52 Full-Scale Intelligence Quotient Test Scores and the Impropriety of “Ethnic (or Socio-Economic) Adjustment” in Atkins Cases
   Robert M. Sanger, JD*

10:45 a.m. - 11:25 a.m. F53 Defining Depravity in Crime: Approaching a Standard for Sentencing Application
   Michael Welner, MD*
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<th>Time</th>
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<tr>
<td>11:25 a.m.</td>
<td>F54</td>
<td>Sexual Abuse Case Study — Forensic Science and the Age of Social Media</td>
<td>Brian C. Zubel, JD*</td>
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<tr>
<td>11:45 a.m.</td>
<td>F55</td>
<td>Digital Evidence 101 — The Evidentiary Value of Digital Evidence: The Impact of Digital Evidence on the Investigation and Brief of Evidence</td>
<td>Paul Reedy, BS*</td>
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</tbody>
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**Wednesday**

**Poster Session**

11:30 a.m. - 1:00 p.m. **G1** Non-Traditional Positive Dental Identification  
Laura P. Moses Smalley, DMD*; Michael P. Tabor, DDS; Richard A. Weems, DMD, MS; Lee Wilson, DMD; Darinka Mileusnic-Polchan, MD, PhD; Murray K. Marks, PhD

11:30 a.m. - 1:00 p.m. **G2** X-Ray Photoelectron Spectroscopy (XPS) Analysis of Etched Dental Crown Metal Surfaces Demonstrates Prior Immersion in Hydrochloric Acid  
Alexander S. Forrest, MDS*; Barry Wood, PhD

11:30 a.m. - 1:00 p.m. **G3** Reassessing the Dental Features of Lamendin’s Age-Estimatation Method  
Eleni Zorba, BS; Matteo Borrini, PhD*; Konstantinos Moraitis, PhD

11:30 a.m. - 1:00 p.m. **G4** Evolution of Forensic Odontology Services in Queensland: 1994–2014  
Alistair Soon, BDS*; Alexander S. Forrest, MDS*; Henry Y.H. Wu; Bradley D. Ross, BDS; Annu Nangia, MDS

11:30 a.m. - 1:00 p.m. **G5** Forensic Dentistry and Malpractice Lawsuits in Turkey  
Huseyin Afsin, PhD*; Gulnaz T. Javan, PhD; Beytullah Karadayi, PhD; Abdi Ozaslan

11:30 a.m. - 1:00 p.m. **G6** What You See Is Not Always What You Should Believe: A Presentation of the Inconsistencies Commonly Seen in Antemortem Dental Charting  
Marnie L. Sperling, DMD*

11:30 a.m. - 1:00 p.m. **G7** Analysis of Human Bitemarks in Food and Beverages Using Metric and Biological Analysis  
Ricardo H.A. Silva, PhD*; Lais G. Araujo, MSc; Aline Azevedo, PhD; Raquel F. Gerlach, PhD; Adriana A. Marques, MSc; Wilson A. Silva-Junior, PhD; Rodrigo Galo, PhD

11:30 a.m. - 1:00 p.m. **G8** How the Characteristics of One Tooth Were Used to Make a Dental Identification in a Burn Victim: A Case Report  
Xiomara N. Rivera, DMD*

**Thursday**

**Bitemarks I**

**Moderator:** Richard M. Weledniger, DDS  
Melville, NY

8:30 a.m. - 8:45 a.m. **G9** Methodology and Interests of 3D Modeling of Bitemarks  
Charles E. Georget, PhD*; Aime Conigliaro, MA; Francois Duret, DDS, PhD

8:45 a.m. - 9:05 a.m. **G10** Bitemarks From the Emergency Room to the Courtroom: The Importance of the Expert in Forensic Odontology  
Franklin D. Wright, DMD*; Melissa Mourges, JD*
### ODONTOLOGY

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<th>Time</th>
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<tr>
<td>9:05 a.m.</td>
<td>G11</td>
<td>An Objective, Dynamic Bitemark Overlay Technique</td>
<td>Alexander S. Forrest, MDS*; Chris Little, BS; Alistair Soon, BDS</td>
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<td>9:20 a.m.</td>
<td>G12</td>
<td>Bitemark Evidence</td>
<td>Robert B.J. Dorion, DDS*</td>
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<td>9:40 a.m.</td>
<td>Break</td>
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<td><strong>Bitemarks II</strong></td>
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<td>Moderator:</td>
<td>Mark T. Eilers, DMD</td>
<td>Portland, OR</td>
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<td>9:55 a.m.</td>
<td>G13</td>
<td>Paradigm Shifts on the Validity of Bitemark Evidence and the Dramatic</td>
<td>Emilio Nuzzolese, PhD*</td>
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<td>Connection With Best Practices in Forensic Technical Analysis Via</td>
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<td>the Poma Murder in Rome: A Case Report</td>
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<td>10:15 a.m.</td>
<td>G14</td>
<td>Construct Validity of Bitemark Assessments Using the ABFO Bitemark</td>
<td>Adam J. Freeman, DDS; Iain A. Pretty, DDS, PhD*</td>
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<td>Decision Tree</td>
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<td>10:35 a.m.</td>
<td>G15</td>
<td>Bitemarks: To Profile or Not to Profile — So What’s the Question?</td>
<td>Richard R. Souviron, DDS*</td>
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<td>11:05 a.m.</td>
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<td><strong>Cheiloscopy and Mentorship</strong></td>
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<td>Moderator:</td>
<td>Jennifer A. Moore, DMD</td>
<td>Bethpage, NY</td>
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<td>11:15 a.m.</td>
<td>G16</td>
<td>Lip Prints: Inter-Rater Reliability</td>
<td>Winnie Furnari, MS*</td>
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<td>11:30 a.m.</td>
<td>G17</td>
<td>Morphological Patterns of Melanoderm Lip Prints In Dakar, Senegal</td>
<td>Khalifa Dieng, DDS*</td>
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<td>11:45 a.m.</td>
<td>G18</td>
<td>Honoring My Mentors — Drs. Levine, Snow, Maples, Stimson, and Stein</td>
<td>John P. Kenney, DDS, MS*</td>
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<td>12:00 p.m.</td>
<td>Lunch</td>
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<td><strong>Poster Session</strong></td>
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<td>11:30 a.m.</td>
<td>G19</td>
<td>Complex Dental Restorative Techniques: Are They Recognizable and Do</td>
<td>Alistair Soon, BDS*; Mary A. Bush, DDS; Peter J. Bush, BS</td>
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<td>They Survive Extreme Conditions?</td>
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11:30 a.m. - 1:00 p.m.  G20  Electron Microscopy of Etched Dental Crown Surfaces and Electron Dispersive Spectroscopy (EDS) Studies Following Immersion in Hydrochloric Acid
Alexander S. Forrest, MDS*; Peter J. Hines, PhD

11:30 a.m. - 1:00 p.m.  G21  Chronological Evaluation of Bruising in Bitemarks and Blunt Trauma: Validation of the Nuzzolese-Neri-DiVella (NNDV) Colorimetric Scale
Emilio Nuzzolese, PhD*; Simonetta Lamacchia, RN; Giancarlo Di Vella, MD, PhD*

11:30 a.m. - 1:00 p.m.  G22  Ethical Proceedings Involving Dentists in the State of Minas Gerais, Brazil
Fernanda Capurucho Horta Bouchardet, PhD*; Andrea Gomes Prates, DDS; Mário Marques Fernandes, MSc; Romilda de Melo Alves Branco, DDS; Rogério N. Oliveira, PhD

11:30 a.m. - 1:00 p.m.  G23  Dental Identification Using Facial Reconstruction on a Train Collision Victim’s Mangled Body
Liliana Innamorato, MD; Valeria Santoro, PhD; Alessandra Pentone; Francesco Introna, MD*

11:30 a.m. - 1:00 p.m.  G24  Scanning Electron Microscopy (SEM) and Energy Dispersive X-Ray Spectroscopy (EDS) of a Supposed “Gold Dental Crown”
Alistair Soon, BDS*; Mary A. Bush, DDS; Peter J. Bush, BS

Disaster Victim Identification I

Moderator: Corinne D’Anjou, DMD
St-Lambert, CANADA

1:30 p.m. - 1:50 p.m.  G25  A Hot Air Balloon Crash in Wairarapa, New Zealand: A Forensic Dental Perspective
Judith A. Hinchcliffe, BDS*

1:50 p.m. - 2:20 p.m.  G26  Isle-Verte Disaster
Sylvain Laforte, DMD*; Robert B. J. Dorion, DDS*; Andre Ruest, DMD*; Sylvain Desranleau, DMD*

2:20 p.m. - 2:40 p.m.  G27  Dental Identification of 530 Landslide Victims: Lessons Learned
Kyle C. Tanaka, DDS*; Stephanie Kavanaugh, DMD*; Gary L. Bell, DDS

2:40 p.m. - 2:50 p.m.  Break

Disaster Victim Identification II

Moderator: Lena D. Karkalas, DDS
Providence, RI

2:50 p.m. - 3:10 p.m.  G28  Dental Identification of the 2008 Peruvian Andes Helicopter Crash Victims
Roy H. Sonkin, DDS*; Richard M. Weledniger, DDS

3:10 p.m. - 3:25 p.m.  G29  The Reno, Nevada Air Race Accident
Donna J. Hellwinkel, DDS*; Ellen G.I. Clark, MD; Rudolph Bein, BA

*Presenting Author
ODONTOLOGY

3:25 p.m. - 3:35 p.m.  Break

Dental Identification Case Reports I

Moderator:  Judy Y. Marshall, DMD
Marshall Family Dentistry
Port Charlotte, FL

3:35 p.m. - 3:50 p.m.  G30  Identification of an Unknown Sailor From the December 7, 1941, Attack on Pearl Harbor
John A. Lewis, Jr., DDS*

3:50 p.m. - 4:10 p.m.  G31  Forensic Dental Examination of Disinterred 19th-Century Archaeological Remains
Thomas J. David, DDS*; Adam J. Freeman, DDS

4:10 p.m. - 4:25 p.m.  G32  Adam Mayes: America’s Most Wanted — A Lack of Wisdom?
Edgar W. Turner, DDS*

4:25 p.m. - 4:30 p.m.  Break

Dental Identification Case Reports II

Moderator:  Robert E. Barsley, DDS, JD
LSU School of Dentistry
New Orleans, LA

4:30 p.m. - 4:45 p.m.  G33  Two Teens, Midnight, and a Porsche® Carrera® — What Could Go Wrong?
John P. Kenney, DDS, MS*

4:45 p.m. - 5:05 p.m.  G34  The Case of the Missing Mandible
Roger D. Metcalf, DDS, JD*; Janice W. Klim-Lemann, DDS*

5:05 p.m. - 5:20 p.m.  G35  Single Tooth Dental Identification Assisted by Digital Superimposition
Amber D. Riley, MS*; Anthony R. Cardoza, DDS; Raymond Johansen, DMD

5:20 p.m. - 5:35 p.m.  G36  Identification by Photograph: A Case Presentation
Barbara L. Needell, DMD*

Friday

Dental Identification

Moderator:  Edgar W. Turner, DDS
Somerville, TN

8:30 a.m. - 8:45 a.m.  G37  A Case for the Records — The Importance of Antemortem Records in Making a Positive Dental Identification
Randolph L. Mitchell, DMD*
8:45 a.m. - 9:05 a.m.  G38  Fire, Fraud, and Forensics: A Complex Case Study in Dental Identification  
Jacqueline S. Reid, DDS*; Diane Karluk, MD; Andrew L. Falzon, MD

9:05 a.m. - 9:25 a.m.  G39  Recovery and Processing of Multiple Partial and Total Cranial Fresh Cadaver Heads Purportedly for Surgical Teaching  
Taylor L. Gardner, BFSc*; Yolanda Nerkowski, BA*; Robert E. Wood, DDS, PhD*

9:25 a.m. - 9:40 a.m.  G40  Identifying the Edentulous  
Corinne D’Anjou, DMD*; Robert B. J. Dorion, DDS*; Alistair Soon, BDSc

9:40 a.m. - 9:50 a.m.  Break

Animal Bites

Moderator: Marnie L. Sperling, DMD  
Somerset, NJ

9:50 a.m. - 10:10 a.m.  G41  Cougar Attack Fatality  
Peter W. Loomis, DDS*

10:10 a.m. - 10:30 a.m.  G42  Estimating the Incidence of Dog Bite-Related Injuries in Australia From 1999 to 2012  
Mithun Rajshekar, MFSc*; Leigh Blizzard, PhD; Roberta Julian, PhD; Marc Tennant, PhD; Anne-Marie Williams, PhD; Laurence Walsh, PhD; Alexander S. Forrest, MDSc; Gary Wilson, MS

10:30 a.m. - 10:45 a.m.  Break

Age Estimation

Moderator: Emilio Nuzzolese, PhD  
Bari, ITALY

10:45 a.m. - 11:00 a.m.  G43  Visualization of Histological and Physiological Criteria Used in Dental Methods of Age Assessment  
Aime Conigliaro, MA*; Charles E. Georget, PhD

11:00 a.m. - 11:20 a.m.  G44  The London Atlas — A New Method for Dental Age Estimation  
Sakher J. AlQahtani, PhD*; Mark Hector, PhD; Helen M. Liversidge, PhD

11:20 a.m. - 11:40 a.m.  G45  Dental Age Estimation: The 18-Year Threshold — A Source of Error Explored  
Victoria Sorrell Lucas, PhD*; Fraser McDonald, PhD; Graham J. Roberts, MDS

11:40 a.m. - 12:00 p.m.  G46  Immigration-Related, Dental Age-Estimation Cases for the Del Rio and Laredo Sectors of the United States-Mexico Border in Texas  
David R. Senn, DDS*

12:00 p.m. - 1:30 p.m.  Lunch
Age Estimation, Educational Opportunities, and International DVI

Moderator: Holland Maness, DMD
Memphis, TN

1:30 p.m. - 1:50 p.m. G47 Dental Age Estimation: Appropriate Censoring of Stage H
Graham J. Roberts, MDS*; Fraser McDonald, PhD; Victoria Sorrell Lucas, PhD

1:50 p.m. - 2:05 p.m. G48 Unique Dental Morphology With Concurrent Dental Developmental Anomalies: A Case Study Demonstrating the Utility of a Multidisciplinary Approach
Judy Y. Marshall, DMD*; Jan Westberry, DMD; Michael W. Warren, PhD

2:05 p.m. - 2:20 p.m. G49 A New 12-Month, University-Based U.S. Fellowship Program in Forensic Odontology
Richard A. Weems, DMD, MS*; Lee Wilson, DMD; Michael P. Tabor, DDS; William M. Bass III, PhD; Darinka Mileusnic-Polchan, MD, PhD; Murray K. Marks, PhD

2:20 p.m. - 2:35 p.m. G50 A Forensic Odontology Aspect of Disaster Victim Identification Across Members of the International Organization for Forensic Odonto-Stomatology
Shirley Miranda, MScD*

2:35 p.m. - 2:45 p.m. Break

Research and Standard of Care

Moderator: Roger D. Metcalf, DDS, JD
Tarrant County Medical Examiner’s District
Fort Worth, TX

2:45 p.m. - 3:00 p.m. G51 Current Trends in Forensic Odontology Research Nearly 30 Years Later
Shirley Miranda, MScD*; Jeffrey W. Shirah, DMD

3:00 p.m. - 3:15 p.m. G52 Forensic Odontology Science: Applications in the Family of Forensics
Peter J. Bush, BS*; Mary A. Bush, DDS

3:15 p.m. - 3:30 p.m. G53 Application of Digital Laboratory and Clinical Dental Evidence
Raymond G. Miller, DDS*; Mary A. Bush, DDS

3:30 p.m. - 3:45 p.m. G54 Failure to Diagnose Oral Cancer Is Not Always Malpractice
Yolanda Nerkowski, BA; Taylor L. Gardner, BFSc; Robert E. Wood, DDS, PhD*

3:45 p.m. - 4:00 p.m. G55 Forensic Odontology (FOd) in the Canadian Armed Forces: FOd Activities Historical Review and Structure
Genevieve D.S. Bussiere, DMD*

4:00 p.m. - 4:15 p.m. Break

*Presenting Author
Potpourri

**Moderator:** Melinda Hacker, DDS
Carrizozo, NM

4:15 p.m. - 4:30 p.m. **G56** Odontology Support for Humanitarian Events
James P. Fancher, DDS*

4:30 p.m. - 4:45 p.m. **G57** Restoring Smiles for Victims of Domestic Violence
Helena Soomer Lincoln, DDS, PhD*

4:45 p.m. - 5:00 p.m. **G58** The Implications of a Guilty Verdict for an Innocent Defendant
John P. Demas, DDS*

5:00 p.m. - 5:15 p.m. Questions & Answers
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  
**H1** An Autopsy Report: Death Secondary to a Widely Disseminated Invasive Scopulariopsis Infection  
Ross J. Miller, MD*; Sean Abbott, PhD; Connie F.C. Gibas, PhD; Marius Tarau, MD; Mary H. Dudley, MD; Peter C. Iwen, PhD

11:30 a.m. - 1:00 p.m.  
**H2** Incidence and Distribution of Intracellular Fat in Cardiac Myocytes in Chronic Alcoholics  
Amy Deibler*

11:30 a.m. - 1:00 p.m.  
**H3** Congenital Valsalva Sinus Aneurysm Causing Sudden Unexpected Death in a 20-Year-Old Woman  
Selly R. Strauch, MD; Charu Subramony, MD; Brooke Sims, MD*

11:30 a.m. - 1:00 p.m.  
**H4** Usability of Immunohistochemistry in Forensic Pathology  
Iana Lesnikova, MD, PhD*; Marc N. Schreckenbach; Liv Lindegaard Papanikolaou, MSc; Maria P. Kristensen, MD; Stephen Hamilton-Dutoit

11:30 a.m. - 1:00 p.m.  
**H5** Death Due to a Congenital Vascular Anomaly of Pulmonary Hamartoma Type: Malpractice or Tragic Fatality?  
Maricla Marrone, MD; Francesca Tarantino, MD*; Alessio Ostuni, MD; Andrea Marzullo; Francesco Vinci, MD

11:30 a.m. - 1:00 p.m.  
**H6** Adult Epiglottitis: A Case Series Review in an Autopsy Population  
Maggie Bellis*; Jayantha Herath, MD; Michael S. Pollanen, MD

11:30 a.m. - 1:00 p.m.  
**H7** Fatal Ice Cream: A Rare Case of Food-Induced Anaphylactic Shock  
Gabriela Perilli, MD*; Benedetta Di Battista, MD; Sara Vita, MD; Antonella Giuliani, MD; Stefano D’Errico, MD

11:30 a.m. - 1:00 p.m.  
**H8** Sudden Intrauterine Death Related to a Fork Bead Cord  
Luisa Andrello, MD; Laura Della Chiesa, MD; Silvia D. Visonà, MD; Antonio M.M. Osculati, MD*

11:30 a.m. - 1:00 p.m.  
**H9** Death as a Consequence of an Intestinal Obstruction Due to an Abnormal Congenital Band in a 4-Year-Old Child  
Massimiliano dell’Aquila, MD*; Aniello Maiese; Serenella Serinelli, MD; Lorenzo Gatto, MD; Luigi Bonaccorso, MD

11:30 a.m. - 1:00 p.m.  
**H10** A Fatality Due to Type I Long QT Syndrome (LQTS) Associated With Electrolyte Abnormalities and Therapeutic Levels of Citalopram  
Dennis J. Chute, MD*; Robert J. Bready, MS

11:30 a.m. - 1:00 p.m.  
**H11** A Case of Lethal Idiopathic Plasmacytic Lymphadenopathy With Polyclonal Hypergamma globulinemia: A Medical Challenge for the Forensic Pathologist  
Giancarlo Di Vella, MD, PhD*; Oronzo Schiraldi; Lucia Tattoli, PhD; Biagio Solarino, PhD

*Presenting Author
11:30 a.m. - 1:00 p.m. H12 Sudden Death Due to Drug-Induced Vasculitis
Abdulrezak M. Shakir, MD*; Jennifer Janssen, MS; Todd M. Luckasevic, DO

11:30 a.m. - 1:00 p.m. H13 Natural Death Caused by Catecholamine Toxicity Due to Pheochromocytoma in a Young Adult
David K. Arbore II, MD*; Kenneth H. Clark, MD, PhD; Todd M. Luckasevic, DO

11:30 a.m. - 1:00 p.m. H14 Multiple Thromboses in a Case of Neonatal Dehydration and Failure to Thrive
Kristine D. Song, BA*; Beth E. Frost, DO; Meggen A. Walsh, DO; Sarah A. Higdon, MD; Cristin M. Rolf, MD; Gregory J. Davis, MD

11:30 a.m. - 1:00 p.m. H15 Sudden Childhood Death Due to Acute Bronchospasm
Sarah A. Higdon, MD*; Beth E. Frost, DO; Kristine D. Song, BA; Meredith H. Frame, MD; William O’Connor, MD; Gregory J. Davis, MD

11:30 a.m. - 1:00 p.m. H16 Rapid Unexpected Death in Late Pregnancy Due to Ruptured Iliac Artery Dissection
Julia Choi*; Stephanie M. Richards; Christine Yoo; Allen Burke, MD

11:30 a.m. - 1:00 p.m. H17 Nutritional Child Abuse: A Case Report of Kwashiorkor and Vitamin D-Related Rickets
Michael S. Pollanen, MD; Charis Kepron, MD; Rebekah Jacques*

11:30 a.m. - 1:00 p.m. H18 Genetic and Histopathological Factors in Thrombo-Embolic Disease: Results of a Preliminary Experimental Study
Isabella Aquila, MD*; Fiorella Caputo, MD; Natalia Malara, PhD; Vannio Vercillo, MD; Silvia Boca; Ciro Di Nuzzo, MFS, PhD; Enzo M. Di Fabrizio, PhD; Pietrantonio Ricci

11:30 a.m. - 1:00 p.m. H19 Sudden, Unexpected Death Due to Fatal Rupture of an Undiagnosed Aneurysm of the Splenic Artery: A Forensic Approach
Luigi Papi; Stefania Fornaro, MD*; Laura Roas, MD; Federica Gori, MD; David Forni, MD; Ranieri Domenici, MD

11:30 a.m. - 1:00 p.m. H20 A Tremor in the Hand That Rocks the Cradle: Fatal Consequences of Postpartum Angiopathy
Rebecca Irvine, MD*; Michael Rodriguez, MBBS

11:30 a.m. - 1:00 p.m. H21 Death Caused by Kawasaki Disease in Infants: Illustration of Three Cases and Literature Review
Emiliano G. Maresi; Antonina Argo*; Stefania Zerbo, MD; Azzurra M. Rizzo, MD; Francesca Portelli; Elisabetta Orlando; Elvira Ventura Spagnolo; Paolo Procaccianti; Emanuele G. Grassedonio, MD; Massimo Midiri

11:30 a.m. - 1:00 p.m. H22 Thoracic Injuries Due to Cardiopulmonary Resuscitation in an Infant: A Case Report
Michael S. Pollanen, MD; Kona Williams, MD*

11:30 a.m. - 1:00 p.m. H23 What a Smell! Discovery of a Seeking Congeners Behavior of Blow Fly Larvae
Julien Boulay, MSc*; Cécile Betremieux, BSc; Damien Charabidze, PhD; Didier Gosset, MD, PhD

11:30 a.m. - 1:00 p.m. H24 Survival of Blow Fly Pupae After Submergence in Fresh, Salt, and Polluted Water
Paola A. Magni, PhD*; Samanta Wolff, BSc; Massimo Meregalli, PhD; Ian Dadour, PhD
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<th>Time</th>
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<tr>
<td>11:30 a.m.</td>
<td>H25</td>
<td>Postmortem Artifacts Caused by the Water Beetle <em>Rhantus validus</em>, Sharp</td>
<td>Christopher Oses, BSc; Edoardo Tosti-Croce, PhD; Herbert Viveros, BSc; Paola A. Magni, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>H26</td>
<td>Biodiversity of Functional Genes: An Aid in Soil Provenance</td>
<td>Priyanka Kushwaha, MS*; Jacqueline Zayas, BS; Yanie Oliva, BS; Maria A. Mendoza, PhD; Beatrice Kallifatidis, MS; DeEtta Mills, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H27</td>
<td>The Application of Novel Next Generation Sequencing (NGS) Technology in Forensic DNA Research</td>
<td>Chia-Hung Huang*; Tsun-Ying Huang; Fang-Chun Chung, MS; Chun-Yen Lin</td>
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<td>11:30 a.m.</td>
<td>H28</td>
<td>Contaminated Corpse Still Flavorful! A Review of Household Products’ Effects</td>
<td>Cindy Aubernon, MS*; Damien Charabidze, PhD; Cedric Devigne, PhD; Didier Gosset, MD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H29</td>
<td>Genotyping of Used Drug Stamp Bags With Special Attention to the Minor Contributor</td>
<td>Aaron Beaver, BA*; Lisa R. Ludvico, PhD</td>
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<td>11:30 a.m.</td>
<td>H30</td>
<td>Death Following Retrobulbar Injection of Desmopressin for the Treatment of Non-Arteritic Anterior Ischemic Optic Neuropathy: Which Implications Indicate This Off-Label Use?</td>
<td>Benedetta Guidi, MD*; Valentina Bugelli, MD*; Stefania Fornaro, MD*; Marco Di Paolo; Marco T. Tuccori, MD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H31</td>
<td>Death Due to Butane and Propane Gas Inhalation in a Cell Block</td>
<td>Francesco Saverio Romolo, PhD; Paola A. Fiore; Simone Cappelletti, MD; Alessandro di Luca, MD*; Costantino Ciallella</td>
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<td>11:30 a.m.</td>
<td>H32</td>
<td>Effects of Different Killing and Storage Methods on Larval Length of the Blow Fly <em>Lucilia Sericata</em></td>
<td>Valentina Bugelli, MD*; Jens Amendt, PhD</td>
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<td>11:30 a.m.</td>
<td>H33</td>
<td>Optimization of a Method for the Extraction of DNA From Human Skeletal Remains</td>
<td>Sherri Deaton, BS*</td>
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<td>11:30 a.m.</td>
<td>H34</td>
<td>Engaging Undergraduate Students in Forensic Entomology Research: Life History Studies of Three Necrophilous Beetles</td>
<td>Erin J. Watson-Horzelski, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>H35</td>
<td>Effects of Amitriptyline on the Development of <em>Megaselia scalaris</em> (Diptera: Phoridae) and Implications on the Estimation of the Minimum Postmortem Interval</td>
<td>Esta Bostock, BSc; Emma Lomas; Peter D. Maskell, PhD; Valentina Bugelli, MD; Stefano Vanin, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>H36</td>
<td>Spatial and Temporal Variability in Soils — Their Importance for Intelligence and Forensic Application</td>
<td>Natalie Damaso*, Yu Cheung, BSc; DeEtta Mills, PhD</td>
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### Thursday — Session I

**Pediatrics— The Kids Are Not Alright**

**Moderator:** Kim A. Collins, MD  
LifePoint Organ and Tissue Donation Services  
Charleston, SC

**Co-Moderator:** Dawn B. Holmes, MD  
Denver OME  
Denver, CO

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<td>8:30 a.m.</td>
<td>8:45 a.m.</td>
<td><strong>H37 SIDS, SUID, and Sudden Death in the Young: Where Do We Stand Today?</strong></td>
<td>Wendy M. Gunther, MD*</td>
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<td>8:45 a.m.</td>
<td>9:00 a.m.</td>
<td><strong>H38 Deaths Due to Child Abuse: A Five-Year Review of Cases in the Cook County Medical Examiner’s Office</strong></td>
<td>Serenella Serinelli, MD*; Ponni Arunkumar, MD; James A. Filkins, MD, JD, PhD; Lorenzo Gitto, MD*</td>
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<td>9:00 a.m.</td>
<td>9:15 a.m.</td>
<td><strong>H39 Reclassification of Sudden Infant Deaths in New Mexico</strong></td>
<td>Lauren E. Dvorscak, MD*; Sarah Lathrop, DVM, PhD; J. Keith Pinckard, MD, PhD</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>9:30 a.m.</td>
<td><strong>H40 A Re-Examination of Patterns of Abuse in Children</strong></td>
<td>Gina O. Hart, MA*; Steven A. Symes, PhD; Roger A. Mitchell, MD</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>9:45 a.m.</td>
<td><strong>H41 Autopsied Cases of Suspected Child Abuse Showing Absence of Clinically Diagnosed Injuries</strong></td>
<td>Ronald K. Wright, MD, JD*</td>
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<tr>
<td>9:45 a.m.</td>
<td>10:00 a.m.</td>
<td><strong>H42 Evaluation of Rib Fracture Injury Modes and Biomechanics in Abused Infants</strong></td>
<td>Steven A. Symes, PhD*; Ericka N. L’Abbe, PhD; Erin Chapman, MS</td>
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<td>10:00 a.m.</td>
<td>10:15 a.m.</td>
<td>Break</td>
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<td>10:15 a.m.</td>
<td>10:30 a.m.</td>
<td><strong>H43 Rebleeding Into Subdural Neomembranes and the Myth of “Two in a Row” in Childhood</strong></td>
<td>Nea D. Moyer, BS*; John A. Bechinski, DO; Rudy J. Castellani, MD</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>10:45 a.m.</td>
<td><strong>H44 Intrauterine Liver Disease and Sudden Unexpected Infant Death: Causally-Related or Coincidence?</strong></td>
<td>Peter J. Stephens, MD*</td>
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<td>10:45 a.m.</td>
<td>11:00 a.m.</td>
<td><strong>H45 Fatal Aortoesophageal Fistulae Due to Foreign Body Ingestion in Young Children: Presentation of Two Cases</strong></td>
<td>Tasha Z. Greenberg, MD*; Susan J. Roe, MD; David Stephen, DO; Nizam Peewani, MD</td>
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<tr>
<td>11:00 a.m.</td>
<td>11:15 a.m.</td>
<td><strong>H46 Mortality Related to Falls From the Balcony of Children Younger than 18 Years of Age</strong></td>
<td>Fatih Sahin; Abdurrahman Emir; Erdinç Özdemir; Safa Celik*; Sermet Koc; Gulnaz T. Javan, PhD</td>
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<td>11:15 a.m.</td>
<td>11:30 a.m.</td>
<td><strong>H47 Shaken Baby Syndrome/Abusive Head Trauma: An Ongoing Debate Not Yet Resolved</strong></td>
<td>Antonio Oliva, MD, PhD*; Vincenzo M. Grassi, MD; Valentino De Matteis, MD; Antonio Marcelli, MD; Riccardo Rossi, MD</td>
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*Presenting Author*
11:30 a.m. - 11:45 a.m.  **H48** Do the Eyes Have It? Traumatically Induced Primary Optic Nerve Sheath Hemorrhage  
*Erik K. Mitchell, MD*; Stephen R. Roseborough, BA

11:45 a.m. - 12:00 p.m.  **H49** Case Report: Institutional Experience With the Molecular Autopsy and Its Obstacles  
*Lorraine Lopez Morell, MD*; Jerri McLemore, MD

12:00 p.m. - 1:15 p.m.  Lunch

**Poster Session**

11:30 a.m. - 1:00 p.m.  **H50** In Ballistics, Interpretations of Postmortem Multi-Slice Computed Tomography Are Often Simple … But Not Always  
*Dedouit Fabrice, MD*; Frederic Savall; Fatima-Zohra Mokrane, MD; Marion Vergnault; Hervé Rousseau, PhD; Daniel Rouge, MD; Norbert Telmon, PhD, MD

11:30 a.m. - 1:00 p.m.  **H51** Flash Fire Victims and Carboxyhemoglobin Concentrations: A Report of Ten Simultaneous Flash Fire Fatalities With Autopsy Findings  
*Thomas K. Resk, MD*; James A. Bailey, PhD; Jeremy Stuelpnagel, MD; Thomas A. Rudd, MS, MD

11:30 a.m. - 1:00 p.m.  **H52** A Case of Intrauterine Fetal Cranial Injury After Attempted Suicide During Pregnancy  
*Lucia Tattoli, PhD; Giorgia Pinto, MD*; Giancarlo Di Vella, MD, PhD; Biagio Solarino, PhD

11:30 a.m. - 1:00 p.m.  **H53** Skeletal Trauma Analysis in the Elderly: A Case Study on the Importance of a Contextual Approach  
*Ashley L. Humphries, MA*; Ashley B. Maxwell, MA; Ann H. Ross, PhD; Jonathan Privette

11:30 a.m. - 1:00 p.m.  **H54** Hydrogen Sulfide Fatality From a Domestic Sink Drain Exposure  
*Mary H. Dudley, MD*; Marius Tarau, MD; Tom Hensley; Megha Garg; Diane C. Peterson, MD; Uyttam Garg, PhD; B. Robert Pietak, MD

11:30 a.m. - 1:00 p.m.  **H55** A Complex Bullet Path: Entrance in the Head, Exit Through a Body Orifice, and Re-Entrance in the Arm  
*Vadim Mesli, MD*; Tournel Gilles, MD, PhD; Philippe Morbidelli, MD; Erwan Le Garff, MD; Yann Delannoy, MD; Valéry C. Hedouin, MD, PhD

11:30 a.m. - 1:00 p.m.  **H56** Autoerotic Accidental Death by Self-Inflicted Asphyxia by Body-Wrapping in a Plastic Curtain  
*Claudia Rosa, MD; Roberto Testi, MD, PhD; Patrizia Mazzucco, MD; Paola A. Magni, PhD*

11:30 a.m. - 1:00 p.m.  **H57** The Utility of CT Imaging in Determining Cause of Death in a Case of Iatrogenic Barotrauma  
*Maggie Bellis*; Michael J. Pickup, MD; Michael S. Pollanen, MD

11:30 a.m. - 1:00 p.m.  **H58** Fatal Pedestrian-Vehicle Encounters: Is Pedestrian Blood-Alcohol Concentration a Significant Factor?  
*Rodrigo N. Taniguchi*; Carmen Silvia M. Miziara, MD; PhD; Ivan D. Miziara, MD, PhD; Julio Ponce; Daniel R. Muñoz, MD, PhD

*Presenting Author*
H59 When Life Makes No Sense — Suicide by More Than 150 Stab and Incised Wounds With Atypical Features
Aniello Maiese*; Lorenzo Gitto, MD; Serenella Serinelli, MD; Massimiliano dell’Aquila, MD; Giorgio Bolino, MBBS

H60 Burned Human Remains: The Importance of a Multidisciplinary Approach
Martina Focardi*; Francesco Mari; Ugo Ricci, MD; Viola Bartolini; Vilma Pinchi, PhD

H61 A Retrospective Study of Drowning Cases in Tarrant and Adjacent Counties From 2008 Through 2013
Marc Jones, BS*; David Stephen, DO; Nizam Peerwani, MD; Ronald L. Singer, MS

H62 Hemorrhagic Death With Particular Postmortem Computed Tomography Findings Associated With Decompression Illness: A Case Report
Yu Igari, MD*; Tomoya Ikeda, MD; Tadashi Hosoya, MD; Akihito Usui, MS; Yusuke Kawasumi, MD, PhD; Masato Funayama

H63 A Bizarre Way to Kill the Ex-Wife: Two Knives Buried in the Chest, Two Additional Knives, and a Screwdriver Implanted in the Thorax
Joao E.S. Pinheiro, MD*; Antonio Padilha; Maria Moura; Samantha Wijerathna

H64 Homicide or Suicide? A Case Report of an Atypical Hanging
Furio Martino Patete*; Lucia Lops, MD; Francesco Sessa, BS; Sara Vita, MD; Margherita Neri, MD, PhD

H65 Impact of Postmortem Computed Tomography on the Evaluation of Strangulation Deaths
Lauren A. Decker*; Gary M. Hatch, MD; Sarah Lathrop, DVM, PhD; Kurt B. Nolte, MD

H66 Cardiac Arrest During Police Restraint in a Man With Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT): Frightened to Death?
Ashwyn Rajagopalan, MD*; Michael S. Pollanen, MD

H67 Atypical Self-Strangulation Through a Sphygmomanometer: An Uncommon Suicide Method
Sara Lo Pinto, MD*; Tiziana Tacchella, MD; Francesca Fossati, MD; Alessandro Bonsignore, MD; Francesco Ventura, MD

H68 The Importance of Postmortem Computed Tomography in a Gunshot Wound-Related Death: A Case Report
Giorgio Bolino, MBBS; Lorenzo Gitto, MD*; Massimiliano dell’Aquila, MD; Serenella Serinelli, MD; Aniello Maiese*

H69 Terminal Performance of Zombie-Killing Bullets and Polymer-Tipped Bullets
Todd M. Luckasevic, DO*; David K. Arboe II, MD; Thomas M. Morgan, BS; Kenneth H. Clark, MD, PhD; Abdulrezak M. Shakir, MD

H70 Savage Murder: Mutilation and Dismemberment — Why, When, and Where?
Baiyang Xu, MD*
11:30 a.m. - 1:00 p.m.  H71 The New Italian Law on Femicide: Was There a Real Reduction of Cases of Femicide? The Foggia (Apulia, Italy) Scenario
Benedetta Di Battista, MD*; Stefania C. Bello, MD; Margherita Neri, MD, PhD; Natascha Pascale, MD; Cristoforo Pomara, MD, PhD; Stefano D’Errico, MD; Irene Riezzo, PhD; Francesco Sessa, BS; Emanuela Turillazzi, MD, PhD

11:30 a.m. - 1:00 p.m.  H72 Lethal Drug Intoxication of a Bank Robber: The Role of Physical Restraint
Pasquale Beltempo, MD*; Roberto Gagliano-Candela; Valeria Bruno, MD; Biagio Solarino, PhD

11:30 a.m. - 1:00 p.m.  H73 The Forensic Science Investigations in Recent Cases of Victim’s Cannibalism: Reality or Fiction? A Case of Matricide and a Review of Literature
Isabella Aquila, MD*; Ciro Di Nunzio, MFS, PhD*; Silvia Boca; Francesco Ausania, MD; Maurizio Saliva, MD; Ester de Luca, MD; Matteo Borrini, PhD; Pietrantonio Ricci

11:30 a.m. - 1:00 p.m.  H74 Death Following Intravenous Administration of Sucralfate
Henrik Druid, MD, PhD*

11:30 a.m. - 1:00 p.m.  H75 Alibi Verification Using Diatoms
Paola A. Magni, PhD*; Tommaso Pacini, MSc; Marco Puzzi, PhD; Marco Vincenti, MS; Ian Dadour, PhD; Elisa Falasco, PhD

11:30 a.m. - 1:00 p.m.  H76 Sudden Death After Methylprednisolone Sodium Hemisuccinate Injection: A Rare Case of Anaphylaxis
Giuseppe Ruggiero Parente, MD*; Marco Savito, MD; Furio Martino Patete; Gaetano Serviddio, MD, PhD, Cristoforo Pomara, MD, PhD

11:30 a.m. - 1:00 p.m.  H77 Body Packers and Body Stuffers: The Role of Cardiac Oxidative Stress on Myocardial Damage
Dania De Carlo, MD*; Stefania C. Bello, MD; Marco Di Paolo; Carmela Fiore, MD; Francesca Maglietta; Angelo Montana, MD; Antonio Oliva, MD, PhD; Laura Panata; Daniela Cerretani, BS; Irene Riezzo, PhD

11:30 a.m. - 1:00 p.m.  H78 Crystallins Aging Process and Related Post-Translational Modifications (PTMs) in Determination of Human Age
Hangqing Wang*; Mehdi Moini, PhD

11:30 a.m. - 1:00 p.m.  H79 Hydrophilic Polymer Embolization: A Common Incidental Finding at Medical Autopsy
Stephanie M. Richards*; Julia Choi; Allen Burke, MD

11:30 a.m. - 1:00 p.m.  H80 Fatalities Associated With Aldicarb
Hannah C. Jarvis, MRCS*; Carolyn A. Kappen, MD

11:30 a.m. - 1:00 p.m.  H81 An Extremely Enjoyable Rave Party Resulting in a Fatal Sleep: The Reliability of Postmortem Computed Tomography in a Case of Crush Asphyxia
Serenella Serinelli, MD*; Massimiliano dell’Aquila, MD; Lorenzo Gatto, MD; Antello Maiese; Giorgio Bolino, MBBS

11:30 a.m. - 1:00 p.m.  H82 3D Body Surface Documentation in Forensic Pathology
Petra Urbanová, PhD*; Petr Hejna, PhD; Mikolas Jurda, MSc
### PATHOLOGY/BIOLOGY

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<td><strong>H83</strong> Postmortem Changes on Computed Tomography (CT) Can Assist With the Diagnosis of Biliary Tract Disease</td>
<td>Michael J. Pickup, MD*</td>
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<td><strong>H84</strong> Idiopathic Arterial Calcification of Infancy: A Case Report With Postmortem Computed Tomography (PMCT) and Histologic Findings</td>
<td>Zabiullah Ali, MD*; Pamela E. Southall, MD; David R. Fowler, MD</td>
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**Postmortem Imaging— I Can See Clearly Now**

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<td>1:15 p.m.</td>
<td><strong>H85</strong> A Prospective Double-Blinded Comparison of Autopsy and Postmortem Computed Tomography (PMCT) for the Evaluation of Pediatric Trauma Deaths</td>
<td>Sarah Lathrop, DVM, PhD*; Gary M. Hatch, MD; Chandra Gerrard, BS; Susan Williamson, MD; Jan Price, RN, MSA; Kathleen M. Lopez, MD; Sam W. Andrews, MD; Ross E. Zumwalt, MD; Ian Paul, MD; Jamie Eifritz, MD; Kurt B. Nolte, MD</td>
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<tr>
<td>1:30 p.m.</td>
<td><strong>H86</strong> Micro-Computed Tomography (Micro-CT) Features of Laryngeal Fractures in a Case of Fatal Manual Strangulation</td>
<td>Paolo Fais, MD*; Chiara Giraudo, MD; Renzo Giordano, MD; Federica Bortolotti, PhD, MD; Franco Tagliaro, PhD, MD</td>
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<tr>
<td>1:45 p.m.</td>
<td><strong>H87</strong> Challenging the Role of Autopsy — Results of a Multicenter Study to Validate Multi-Phase Postmortem CT-Angiography (MPMCTA)</td>
<td>Jochen Grimm, MD, JD*; Axel Heinemann, MD; Giuseppe Guglielmi, PhD; Krzysztof Wozniak, MD; Franziska Eplinuis, MD; Fabrice F. Dedouit; Florian Fischer, MD; Guy N. Ruttly, MD; Bruno Morgan, BS; Holger Wittig, MD; Patrice Mangin, MD, PhD; Silke Grabherr, PhD</td>
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<tr>
<td>2:00 p.m.</td>
<td><strong>H88</strong> Diagnostic Values of Postmortem Computed Tomography (PMCT) and Multi-Phase Postmortem CT-Angiography (MPMCTA) in Blunt Trauma Death</td>
<td>Dina A. Shokry, MD*; Maged Nabil Hassien, MS; Axel Heinemann, MD; Klaus Püscher, MD, PhD; Hermann Vogel, MD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td><strong>H89</strong> Pathology of the Vascular System and Its Influence on Postmortem Computed Tomography (PMCT) and Multi-Phase Postmortem CT-Angiography (MPMCTA)</td>
<td>Coraline Egger, MD*; Paul Vaucher, MSc; Pierre Bize, MD; Bruguier Christine; Patrice Mangin, MD, PhD; Silke Grabherr, PhD</td>
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<tr>
<td>2:30 p.m.</td>
<td>Questions &amp; Answers</td>
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<td>2:45 p.m.</td>
<td>Break</td>
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<tr>
<td>3:00 p.m.</td>
<td><strong>H90</strong> Detection of Pulmonary Fat Embolism in Cases With Postmortem CT-Angiography (PMCTA) — Preliminary Results</td>
<td>Maria Del Mar Lesta, MD*; Patrice Mangin, MD, PhD; Marc D. Bollmann, MD</td>
</tr>
</tbody>
</table>

*Presenting Author*
3:15 p.m. - 3:30 p.m.  **H91** Limitations of Multi-Phase Postmortem CT-Angiography (MPMCTA) in Cases of Fat Embolism: The Goal of Immunohistochemistry to Distinguish Between Artificial and Vital Fat Embolism

Natascha Pascale, MD*; Stefania C. Bello, MD; Giuseppe Bertozzi, MD; Santina Cantatore; Gianpaolo Grilli, MD; Margherita Neri, MD, PhD; Irene Riezzo, PhD; Cristoforo Pomara, MD, PhD

3:30 p.m. - 3:45 p.m.  **H92** Implications of Postmortem Magnetic Resonance Imaging in Sudden Cardiac Death

Marco Di Paolo; Tommaso Guerrini; Stefania Fornaro, MD; Laura Roas, MD; Benedetta Guidi, MD*; Giovanni Donato Aquaro, MD; Ranieri Domenici, MD

3:45 p.m. - 4:00 p.m.  **H93** Visualization of Myocardial Infarction by Postmortem Single-Organ Coronary Computed Tomography: A Feasibility Study

Matteo Polacco, MD; Vincenzo M. Grassi, MD; Antonio Oliva, MD, PhD; Riccardo Rossi, MD*; Valentino De Matteis, MD

4:00 p.m. - 4:15 p.m.  **H94** “Virtopsy” Utility on Mummified Corpses: Two Italian Iconic Cold Cases

Alessandra Pentone*, Liliana Innamorato, MD; Ilaria De Vitis; Francesco Introna, MD

4:15 p.m. - 4:30 p.m.  **H95** A Scream From the Past: A Multidisciplinary Approach in a Concealment of a Mummified Corpse

Lorenzo Gitto, MD*; Aniello Maiese; Serenella Serinelli, MD; Massimiliano dell’Aquila, MD; Giorgio Bolino, MBBS

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**Thursday — Session II**

**Jay Dix Memorial Bonus Day**

*Presenting Author* 189

**PATHOLOGY/BIOLOGY**

**Moderator:** Michael A. Graham, MD

Saint Louis University School of Medicine

Division of Forensic Pathology

St. Louis, MO

9:00 a.m. - 9:10 a.m.  **H96** Jay Dix Memorial Bonus Day Introduction

Michael A. Graham, MD*; Joseph A. Prahlow, MD*; J. Keith Pinckard, MD, PhD*; Joyce L. de Jong, DO*; Jonathan Hayes, MD*

9:10 a.m. - 10:00 a.m.  **H96** Sharp Force Injuries

Joseph A. Prahlow, MD*

10:00 a.m. - 10:10 a.m.  Break

10:10 a.m. - 11:00 a.m.  **H96** Infant Deaths

J. Keith Pinckard, MD, PhD*

11:00 a.m. - 11:50 a.m.  **H96** Deaths Temporally Related to Apprehension by Law Enforcement

Michael A. Graham, MD*

11:50 a.m. - 2:00 p.m.  Lunch
### PATHOLOGY/BIOLOGY

**Friday — Session I**

Entomology and Postmortem Changes — Dust in the Wind

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<tr>
<th>Time</th>
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<tr>
<td>2:00 p.m.</td>
<td><strong>H96</strong> Deaths Related to Sports and Recreation</td>
<td>Joyce L. deJong, DO*</td>
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<tr>
<td>2:50 p.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>3:00 p.m.</td>
<td><strong>H96</strong> Asphyxial Deaths</td>
<td>Jonathan Hayes, MD*</td>
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<td>3:50 p.m.</td>
<td><strong>Discussion</strong></td>
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Moderator: William C. Rodriguez III, PhD  
Office of the Chief Medical Examiner  
Baltimore, MD  
Co-Moderator: Giancarlo Di Vella, MD, PhD  
University of Torino  
Dept Public Health Sciences  
Sezione di Medicina Legale  
Torino, ITALY

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<tr>
<td>8:30 a.m.</td>
<td><strong>H97</strong> Ecology of Decomposition: A Chemical and Biological Profile of the Maggot Mass</td>
<td>Emily Junkins, BS*; David O. Carter, PhD</td>
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<td>8:45 a.m.</td>
<td><strong>H98</strong> ForenSeek: A New Tool for Forensic Entomology</td>
<td>Damien Charabidze, PhD; Valéry C. Hedouin, MD, PhD; Didier Gosset, MD, PhD</td>
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<td>9:00 a.m.</td>
<td><strong>H99</strong> Factors Related to Body Temperature From Scene to Autopsy: Implications for Forensic Entomology</td>
<td>Michelle R. Sanford, PhD*</td>
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<tr>
<td>9:15 a.m.</td>
<td><strong>H100</strong> Should I Stay or Should I Go? Study of Thermic Strategies of Calliphoridae Larvae</td>
<td>Cindy Aubernon, MS*; Damien Charabidze, PhD; Valéry C. Hedouin, MD, PhD; Didier Gosset, MD, PhD</td>
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<td>9:30 a.m.</td>
<td><strong>H101</strong> Aging Blow Fly Pupae Using Hyperspectral Imaging: Another Tool in the Forensic Toolbox</td>
<td>Sasha C. Voss, PhD; Paola A. Magni, PhD; Christian Nansen, PhD; Gavin Flematti, PhD; Ian Dudour, PhD*</td>
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<tr>
<td>9:45 a.m.</td>
<td><strong>H102</strong> Diurnal Oviposition of Blow Flies: Does Time of Day Influence the Likelihood or Magnitude of Oviposition?</td>
<td>Kristi Bugajski, PhD*</td>
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<td>10:00 a.m.</td>
<td><strong>Break</strong></td>
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<td>10:15 a.m.</td>
<td><strong>H103</strong> The First Use of Postmortem Microbiomes in Human Death Investigations</td>
<td>Jennifer L. Pechal, PhD*; Carl J. Schmidt, MD; M. Eric Benbow, PhD</td>
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<td>10:30 a.m.</td>
<td><strong>H104</strong> Cadavers Show Distinctive Thanatomiobioe Signatures</td>
<td>Ismail Can*; Gulnaz T. Javan, PhD; Alexander Pozhitkov, PhD; Peter A. Noble</td>
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*Presenting Author*
10:45 a.m. - 11:00 a.m.  H105 DNA Extraction and Sample Storage Considerations for Using Metagenomic Sequencing Approaches to Evaluate Soil Microbial Communities Associated With Human Death Scenes
Sheree J. Finley, MS*; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;
Gulnaz T. Javan, PhD

11:00 a.m. - 11:15 a.m.  H106 Does Carcass Mass Influence the Structure of Grave Soil Microbial Communities?
David O. Carter, PhD*; Jessica L. Metcalf, PhD; Amnon Amir, PhD; Rob Knight, PhD

11:15 a.m. - 11:30 a.m.  H107 Entomotoxicology: The Past and Where to Go Next
Abigail J. Props, BS*

11:30 a.m. - 11:45 a.m.  H108 Aggregation of Diptera Calliphoridae Larvae: A Keystone Behavior in Forensic Entomology?
Julien Boulay, MSE*; Valéry C. Hedouin, MD, PhD; Damien Charabidze, PhD

11:45 a.m. - 12:00 p.m.  H109 Validating an Equation to Estimate Postmortem Interval on Oahu, Hawaii
Christopher G. Inoue, BS*; David O. Carter, PhD

12:00 p.m. - 1:00 p.m.  Lunch

**DNA, Genetics, and Chemistry**

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<tr>
<td>1:00 p.m.</td>
<td>H110</td>
<td>Development of PowerQuant™ System: A New Robust Human and Male-Specific DNA Quantification System Which Monitors DNA Integrity</td>
<td>Anupama Gopalakrisnan, PhD*; Margaret Ewing, MSFS; Jonelle M. Thompson, MS; Robert McLaren, PhD; Benjamin Krenke, MS; Douglas R. Storts, PhD</td>
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<tr>
<td>1:30 p.m.</td>
<td>H111</td>
<td>In Situ Detection of Latent DNA Using Nucleic Acid Binding Dyes and an Alternative Light Source</td>
<td>Alicia M. Haines, BSc*; Shanan S. Tobe, PhD; Hilton Kobus, PhD; Adrian Linacre, PhD</td>
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<tr>
<td>1:45 p.m.</td>
<td>H112</td>
<td>Comparison of QIAcube® Differential to Manual Differential Extraction When Purified Using the QIAamp® DNA Blood Mini Kit</td>
<td>Kayla Holsworth*; Brittany M. Baguley, PhD; Lisa Smyth-Roam, PhD; Pamela J. Staton, PhD</td>
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<tr>
<td>2:15 p.m.</td>
<td>H113</td>
<td>Detection of Genetic Variations in Cardiac Channelopathies Using Ion Torrent™ Next Generation Sequencing in a Cohort of Autopsy-Negative Sudden Unexplained Deaths</td>
<td>Audrey Farrugia, MD, PhD*; Christine Keyser, PhD; Jean Muller, PhD; Jean-Sébastien Raul; Bertrand P. Ludes, MD, PhD</td>
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<tr>
<td>2:30 p.m.</td>
<td>H114</td>
<td>Evaluation of the Ion Torrent™ PGM™ for Use With Low-Copy and Degraded Whole Mitochondrial Genome</td>
<td>Lisa Skandalis*; Kazufusa C. Okamoto, PhD</td>
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*Presenting Author*
PATHOLOGY/BIOLOGY

3:00 p.m. - 3:15 p.m. Break

3:15 p.m. - 3:30 p.m. H115 Identification of Non-Synonymous SNPs in Archaeological Hair Protein: Calculation of Measures of Identity and Biogeographic Background
Jonathan Hilmer, PhD; Katie Giddons, BSc; Tami Leppert, MSc; Brian Bothner, PhD; Mark Leppert; Andrew Wilson, PhD; Glendon Parker, PhD*

3:30 p.m. - 3:45 p.m. H116 A Multiplex PCR Assay for Simultaneous Analysis of 13 Rapidly Mutating Y-STRs
Rashed Alghafri, MS*; William Goodwin, PhD; Sibte Hadi, PhD

3:45 p.m. - 4:00 p.m. H117 On Combining MicroRNA Analysis With DNA STR Profiling in a Single Stream Process
Dieudonné J. van der Meer, MSc*; Graham A. Williams, PhD

4:00 p.m. - 4:15 p.m. H118 Postmortem Bacterial Translocation: When Does it Happen?
Vadim Mesli, MD*; Erwan Le Garff, MD; Rodrigue Dessein, PhD; Valéry C. Hedouin, MD, PhD; Christel Neut, PhD; Didier Gosset, MD, PhD

4:15 p.m. - 4:30 p.m. H119 Apoptosis in Brain Tissues: Antemortem and Postmortem Cellular Responses
Justin C. Astin*; Shivani Soni, PhD; Gulnaz T. Javan, PhD

4:30 p.m. - 5:00 p.m. Questions & Answers

Friday — Session II

Multidisciplinary Session: Pathology/Biology Session II/Toxicology

Moderator: Meredith A. Lann, MD
OME
Denver, CO

Co-Moderator: Rebecca Jufer Phipps, PhD
State of MD, OCME
Baltimore, MD

8:15 a.m. - 8:30 a.m. H120 Marijuana Edible Consumption as a Contributing Factor in Death: Two Cases and Live Anecdotal Accounts
Dawn B. Holmes, MD*; Meredith A. Lann, MD; Billie-Jo Naysmith, BS; Sarah Urfer, MS; James Louis Caruso, MD

8:30 a.m. - 8:45 a.m. K64 Case Report of a Death Involving the Designer Opioid MT-45 Raises the Spectre of Synthetic Opioids in Forensic Casework
Donna M. Papsun, MS*; Alison Krywanczyk, MD*; James C. Vose, BA; Elizabeth A. Bundock, MD, PhD; Barry K. Logan, PhD

8:45 a.m. - 9:00 a.m. K65 The Art of Embalming vs. the Science of Forensic Toxicology
Sonia Cuevas, BS; Wendy Santiago-Tirado, BS; Marina Stajic, PhD*

9:00 a.m. - 9:15 a.m. H121 Poor Man’s Methadone: A Case Report of Loperamide Toxicity
Jennifer Dierksen*, Morna L. Gonsoulin, MD; Jeffrey Walterscheid, PhD

9:15 a.m. - 9:30 a.m. K66 Case Study: A Suicide Death by Sotalol Overdose
Autumn Massielo, PhD*; Jeffrey Walterscheid, PhD

9:30 a.m. - 9:45 a.m. H122 A Fatal Case of Reye’s Syndrome Associated With Pepto-Bismol®
Sasha Osbourne, MD*; Stephen K. Wilson, MD
PATHOLOGY/BIOLOGY

9:45 a.m. - 10:00 a.m.  H123  Comparison of the Concentrations of Morphine, Methadone, and Diazepam When Sampled From Cardiac, Subclavian, Femoral, and Popliteal Sites and From Clamped and Unclamped Subclavian and Femoral Vein Samples
   Eric Lemaire, MD*; Carl J. Schmidt, MD

10:00 a.m. - 10:15 a.m.  K67  Manners of Death in Drug-Related Fatalities in Florida
   Dayong Lee, PhD*; Chris Delcher, PhD; Mildred M. Maldonado-Molina, PhD; Jon R. Thogmartin, MD; Bruce A. Goldberger, PhD

10:15 a.m. - 10:30 a.m.  Break

Young Forensic Scientists — The Future Is So Bright I Gotta Wear Shades

Moderator: Edmund R. Donoghue, MD
   Georgia Bureau of Investigation
   Savannah, GA

Co-Moderator: Kathryn H. Haden-Pinneri, MD
   Harris Co Inst Forensic Sciences
   Houston, TX

10:30 a.m. - 10:45 a.m.  H124  Electrocution Deaths of United States Service Members From 2003 to 2012
   Wendy S. Warren, DO*; Lisa Rivera, DO; Edward Mazuchowski, II, MD, PhD

10:45 a.m. - 11:00 a.m.  H125  All-Terrain Vehicle and Snowmobile-Related Deaths
   Melissa M. Blessing, DO*; Peter T. Lin, MD

11:00 a.m. - 11:15 a.m.  H126  Suicides in Manitoba, Canada — A Ten-Year Study From 2003 to 2012
   Thambirajah Balachandra, MBBS*; Muzeen Ismath, BSc*

11:15 a.m. - 11:30 a.m.  H127  Epidemiology of Suicide in Denver
   Kelly Kobylanski, DO*; Dawn B. Holmes, MD; Meredith A. Lann, MD; James L. Caruso, MD

11:30 a.m. - 11:45 a.m.  H128  Fentanyl-Laced Heroin: A Maryland Public Health Problem
   Natasha L. Grandhi, MD*; Rebecca Jufer Phipps, PhD; Mary G. Ripple, MD; Suzanne Doyon, MD; David R. Fowler, MD

11:45 a.m. - 12:00 p.m.  H129  Triangulating Time-of-Death With CT Scan, Immunohistochemistry, and Autopsy: An Experimental Study on Murder Case Investigations
   Alessandro di Luca, MD*; Alessandro Mariani; Valeria Panebianco, MD; Luigi Cipolloni, MD, PhD

12:00 p.m. - 1:00 p.m.  Lunch

Sudden Death and Cardiovascular Issues — A Heart Needs a Second Chance

Moderator: Karen F. Ross, MD
   New Orleans, LA

Co-Moderator: Kelly Kobylanski, DO
   Tucson, AZ

1:00 p.m. - 1:15 p.m.  H130  Is It Proper to Cite Mitral Valve Prolapse (MVP) as the Cause of Sudden Cardiac Death (SCD)?
   Francesco Pontoriero, DO*; Abraham T. Philip, MD

*Presenting Author
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<tr>
<td>1:15 p.m.</td>
<td>H131</td>
<td>Double Approach to Patients With Brugada Syndrome by a Genetic and Proteomic Point of View</td>
<td>Sara Partemi; Antonio Oliva, MD, PhD*; Monica Coll Vidal, MS; Graziana Viola, MD; Gavino Casu, MD; Giovanni Cuda, MD, PhD; Domenica Scumaci, PhD; Carolina Giannace, MD; Pietrantonio Ricci; Francesco Ausania, MD; Isabella Aquila, MD; Arianna Serra, MD; Oscar Campuzano, PhD; Catarina Allegru, PhD; Ramon Brugada, PhD</td>
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<td>1:30 p.m.</td>
<td>H132</td>
<td>Sudden Death Due to Undiagnosed Rheumatic Heart Disease in a Child</td>
<td>Pauline Saint-Martin, MD, PhD*; Camille Rerolle, MD; Maxime Faisant, MD; Thierry Lefrancq, MD</td>
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<td>1:45 p.m.</td>
<td>H133</td>
<td>Cardiovascular Abnormalities Associated With Sudden Unexpected Death in Epilepsy</td>
<td>Marisa DelMundo-Galicia, MD*, Steven M. White, MD, PhD</td>
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<td>2:00 p.m.</td>
<td>H134</td>
<td>Sudden Deaths in Patients With Cardiac Rhythm Devices Via Medical Examiner Surveillance and Systematic Autopsy</td>
<td>Zian Tseng, MD, MD*; Christopher Mulvany, BS; Nina Clark, BS; Philip Ursell, MD; Jeffrey Olgin, MD; Amy P. Hart, MD; Nikolas P. Lemos, PhD; Ellen Moffatt, MD*</td>
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<td>2:15 p.m.</td>
<td>H135</td>
<td>A Case of Maternal and Fetal Death by Spontaneous Rupture of Splenic Artery Aneurysm (SAA) in a Nulliparous Pregnancy at the Third Trimester</td>
<td>Monica Salerno, MD, PhD*; Dania De Carlo, MD; Benedetta Di Battista, MD; Gabriela Perilli, MD; Stefania C. Bello, MD</td>
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<tr>
<td>2:30 p.m.</td>
<td>H136</td>
<td>Sudden Death in an 11-Year-Old Child With Epilepsy</td>
<td>Peter T. Lin, MD; Jadee L. Neff, MD, PhD*</td>
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<td>2:45 p.m.</td>
<td>H137</td>
<td>Next Generation Sequencing Technology for the Identification of Genetic Markers Associated With Sudden Unexplained Death and Sudden Infant Death Syndrome</td>
<td>Roger Kahn, PhD*; Nicole Methner; Michael A. Donley, MS; Katherine Welch, MSFS</td>
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<td>3:00 p.m.</td>
<td>Break</td>
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<td>3:15 p.m.</td>
<td>H138</td>
<td>Sudden Cardiac Death Due to Anabolic Androgenic Steroids (AAS): Autoptic, Histopathological, and Toxicological Findings in Four Cases</td>
<td>Francesco P. Busardo, MD*, Enrico De Dominicis, MD; Francesco Ventura, MD; Simona Napoletano, MD; Simona Zani, PhD; Carmela Fiore, MD</td>
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<tr>
<td>3:30 p.m.</td>
<td>H139</td>
<td>The Challenges Faced in Evaluating a Death Related to Left Ventricular Assist Device (LVAD)</td>
<td>Abraham T. Philip, MD*; Megan Keane-Tarchichi, MD; Yvonne Yetman, RN</td>
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<td>3:45 p.m.</td>
<td>H140</td>
<td>Cardiovascular Pathology in Cases of Death Following Autonomic Failure</td>
<td>Enrico A. Risso, MD*, Paolo Garofano, MD, PhD; Dragom Primorac, MD, PhD; Maurizio Cravello, MD</td>
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<tr>
<td>4:00 p.m.</td>
<td>H141</td>
<td>Myocardial Rupture and Cardiopulmonary Resuscitation: Diagnosis and Forensic Issues</td>
<td>Isabelle Plu, MD, PhD*; Jean-Marc Laborie, MD; Thierry Lefrancq, MD; Isabelle Sec, MD; Bertrand P. Ludes, MD, PhD</td>
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<td>4:15 p.m.</td>
<td>H142</td>
<td>Genetic Investigation of Sudden Cardiac Death: The State of the Art in Italy</td>
<td>Antonio Oliva, MD, PhD*</td>
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PATHOLOGY/BIOLOGY

4:30 p.m. - 4:45 p.m.  H143  Homicide by Stroke: Cholesterol Embolus Induced During a Struggle
Ericka A. Becker, BS*; Brandy Shattuck, MD; Rudy J. Castellani, MD

4:45 p.m. - 5:00 p.m.  H144  An Uncommon Cause of Pulmonary Embolism
Adrienne Segovia, MD*; Tasha Z. Greenberg, MD; Kimberly Golden, MD

Saturday

Forensic Pathology Potpourri — Another Brick in the Wall

Moderator: Judy Melinek, MD
PathologyExpert Inc.
San Francisco, CA

Co-Moderator: Eric W. Berg, MD
Blanchfield Army Hospital
Armed Forces Med Examiner Sys
Fort Campbell, KY

8:30 a.m. - 8:45 a.m.  H145  A Novel Approach to a Quality Program in a Medical Examiner’s Office
Sam W. Andrews, MD*; J. Keith Pinckard, MD, PhD

8:45 a.m. - 9:00 a.m.  H146  Worked to Death: A Detailed Discussion of At-Work Deaths in Harris County, Texas
Kathryn H. Haden-Pinneri, MD*

9:00 a.m. - 9:20 a.m.  H147  Quality Assurance Projects at the Los Angeles Medical Examiner/Coroner’s Office
Lakshmanan Sathyavagiswaran, MD*; Christopher B. Rogers, MD

9:20 a.m. - 9:40 a.m.  H148  Forensic Pathologist Concurrence in the Interpretation of Images of Patterned Injuries
Xianming Fang, PhD; William R. Oliver, MD*; Karen L. Kelly, MD; Colleen Tetterton

9:40 a.m. - 10:00 a.m.  H149  Gone and Forgotten: A Medical Examiner’s Nightmare
Mark M. LeVaughn, MD*; Amber M. Plemons, BS; Nicholas P. Herrmann, PhD

10:00 a.m. - 10:15 a.m.  H150  Quality Assurance of Autopsy Cultures
Christopher B. Rogers, MD*, Nicole Ellis, DO

10:15 a.m. - 10:30 a.m.  Break

10:30 a.m. - 10:45 a.m.  H151  A Comparison of Deaths From Diabetic and Alcoholic Ketoacidosis
Anita Lal, MD*; Jacqueline L. Parai, MD; Chris Milroy, MD, LLB

10:45 a.m. - 11:00 a.m.  H152  The Speckled Polarized Lung: Microcrystalline Cellulose Pulmonary Granulomatosis as a Complication of Intravenous Drug Abuse
Wendi G. O’Connor, MD*; Yanfei Huang, MD, PhD; William F. Hamilton, MD; Martha J. Burt, MD

11:00 a.m. - 11:15 a.m.  H153  Death Scene Findings Associated With Accidental Toxicity Deaths in New Mexico, United States, From 2010 to 2011
Timothy J. Dubois*; Sam W. Andrews, MD; Sarah Lathrop, DVM, PhD

11:15 a.m. - 11:30 a.m.  H154  An Analysis of the Causal Relationship Between Maternal/Prenatal Cocaine Use and Stillbirth: Results of a National Hospital Database Study
Frank A. Franklin, PhD*; Michael Freeman, MD, PhD
11:30 a.m. - 11:45 a.m.  **H155**  Heroin Trends in Cuyahoga County, 2013  
Claire Kaspar-Naso, BS; Erin M. Worrell, BSc; Hugh Shannon, BS; Camille Herby, MPH;  
Thomas P. Gilson, MD*

11:45 a.m. - 12:00 p.m.  **H156**  Obstruction of Aqueduct of Sylvius Following Spontaneous Intra-Ventricular Hemorrhage and Meningitis in a Premature Infant Leading to Hydrocephalus and Cystic Cerebellar Degeneration With Polymicrogyria: A Case Study With a Review of Literature  
Avneesh Gupta, MD*; Amanda O. Fisher-Hubbard, MD; Jeffrey Hudson, MD;  
Kilak Kesha, MD; Carl J. Schmidt, MD

*Presenting Author
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  I1  Medicolegal and Criminological Suicide Diagnosis in Historical Cases: A New Methodology  
Luca Massaro, MD*; Matteo Borrini, PhD

11:30 a.m. - 1:00 p.m.  I2  Malingering Detection With the Autobiographical Implicit Association Test  
Laura Muscatello*; Annabella A. Pozzoli, MEd*

11:30 a.m. - 1:00 p.m.  I3  Criminal Behavior and Single Nucleotide Polymorphisms in Genes Related to Dopamine and Serotonin Modulation  
Gabriella Cansino, BS*; Peyton Gandy, MSFS; Jessica A. Motl, MS; Todd Armstrong, PhD; Matt R. Nobles, PhD; Brian Boutwell, PhD; David A. Gangitano, PhD

11:30 a.m. - 1:00 p.m.  I4  Forensic Analysis of a Chiropractor Accused of Sexual Assaults on His Patients: A Case Report  
Jutta M. Birkhoff, MD, PhD; Giuseppe O. Armocida, MD; Laura Re, MD; Davide Torri, MD; Antonio M. Osculati, MD*

11:30 a.m. - 1:00 p.m.  I5  Aggression and Interpersonal Violence in Hospital Emergency Departments  
Adam H. Crighton, BS; Scott Bresler, PhD*; Dustin B. Wygant, PhD; Gordon L. Gillespie, PhD

11:30 a.m. - 1:00 p.m.  I6  Could Cases of Abusive Head Trauma (Shaken Baby Syndrome) Historically Have Been Misdiagnosed as Pervasive Developmental Disorders?  
Michael J. McCarthy, BA*; Catherine B. Pearman, MPAS; Wendy M. Gunther, MD

11:30 a.m. - 1:00 p.m.  I7  Assessment of Children Who Are in Conflict With the Law: Çukurova University Department of Child and Adolescent Psychiatry Between 2006 and 2011  
Kemal C. Yildirim, MD; Aysegül Y. Tahiroğlu, MD; Kenan Kaya; Necmi Cekin, MD; Mete K. Gulmen, PhD, MD*

Thursday

Annual Lectureship in Toxicology — Multidisciplinary Session: Toxicology/Psychiatry & Behavioral Science

| Moderator: Dan T. Anderson, MS | Co-Moderator: Dean M. De Crisce, MD |
| Los Angeles County | Special Treatment Unit-Annex |
| Dept of ME-Coroner | Avenel, NJ |
| Los Angeles, CA | |

8:00 a.m. - 8:20 a.m.  K41  The Psychological Autopsy: Psychiatry & Behavioral Science and Toxicology in a Working Relationship — Suicide–A General Overview  
Dean M. De Crisce, MD*

8:20 a.m. - 8:40 a.m.  K42  The Psychological Autopsy: Psychiatry & Behavioral Science and Toxicology in a Working Relationship — Medicines of the Mind  
Dan T. Anderson, MS*
PSYCHIATRY & BEHAVIORAL SCIENCE

8:40 a.m. - 9:05 a.m.  K43  The Psychological Autopsy: Psychiatry & Behavioral Science and Toxicology in a Working Relationship — Psychological Autopsy and the Assessment of Motive
Michael Welner, MD*; Dan T. Anderson, MS

9:05 a.m. - 9:30 a.m.  K44  The Psychological Autopsy in Practice: Applying Behavioral Science to Mode of Death Investigations and a Case Study
Lauren Reba-Harrelson, PhD*

9:30 a.m. - 9:45 a.m.  K45  The Psychological Autopsy as an Aid to Scientific Investigation: The Application of the Italian Model to a Cold Case Murder
Laura Volpini, PhD*; Luciano Garofano, PhD*; Jacopo Taloni, MS; Cristina Mazza

9:45 a.m. - 10:15 a.m.  Break

Aggression and Institutions

Moderator:  Dean M. De Crisce, MD
Special Treatment Unit-Annex
Avenel, NJ

10:15 a.m. - 10:35 a.m.  I8  Violence in the Inpatient Psychiatric Unit: A Case Study and Review of the Literature
Varma Penumetcha*; William Cardasis, MD

10:35 a.m. - 11:00 a.m.  I9  Violent Behavior and Protective Factors: A Retrospective Study of a Psychiatric Patient’s Cohort in Southern Italy
Felice F. Carabellese*, Gabriele Rocca; Chiara Candelli, MD, PhD; Donatella La Tegola, PhD; Domenico Montalbo, MD; Roberto Catanesi, MD

11:00 a.m. - 11:30 a.m.  I10  The Acute Stress Response to Threats and Physical and/or Verbal Aggressions: The Influence of Epigenetics on Defensive Strategies of Human Behavior
Luca Massaro, MD*; Patrizia Trapella, JD*; Vincenzo Lusa, JD*

11:30 a.m. - 12:00 p.m.  I11  Mental Health Services Within California’s Prison Realignment Act (Assembly Bill 109): Challenges and Recommendations
Cynthia Chavira, MD*; Timothy Botello, MD; Isabel Lagomasino, MD

12:00 p.m. - 1:00 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  I12  Stalking of Health and Social Services Workers: Preliminary Results of a Study Conducted by the Region of Apulia, Italy
Ignazio Grattagliano, MD*; Grazia Pierri, PsyD; Adriana Pastore, MD; Francesco Margari, MD
11:30 a.m. - 1:00 p.m.  I13  Parricide, Abuse, and Emotional Processing
Romy Greco, PsyD; Ignazio Grattaglino, MD*; Rosalinda Cassibba, PsyD;
Giancarlo Di Vella, MD, PhD; Graziamaria Corbi, PhD; Carlo P. Campobasso, MD, PhD;
Andrea Lisi, PsyD; Maria Carolina Romanelli, MD; Nicola Petrazzelli, PhD;
Alessio Ostuni, MD; Roberto Catanesi, MD

11:30 a.m. - 1:00 p.m.  I14  Elder Abuse: Risk Factors and the Role of the Nurse
Graziamaria Corbi, PhD; Ignazio Grattaglino, MD*; Nicola Ferrara, MD;
Carlo P. Campobasso, MD, PhD

11:30 a.m. - 1:00 p.m.  I15  Qualitative Analysis on the Ability to Provide Consent of Treatment to Patients With
Chronic Neurodegenerative Diseases — Alzheimer’s Disease
Felice F. Carabellese, MD*; Antonio Leo, MD; Donatella La Tegola, PhD;
Chiara Candelli, MD, PhD; Salvatore Distaso, MD; Alessandro Dell’Erba, PhD;
Giancarlo Logrosino, MD, PhD; Roberto Catanesi, MD

11:30 a.m. - 1:00 p.m.  I16  An Unusual Patricide: The Woman Who Dismembered Her Father
Felice F. Carabellese, MD*; Rosa Taratufolo, MD; Roberto Catanesi, MD;
Isabella Aquila, MD; Ciro Di Nunziò, MFS, PhD; Francesco Ausania, MD;
Walter Caruso, MD; Pietrantonio Ricci

11:30 a.m. - 1:00 p.m.  I17  Profiling in Violent Crimes: The Perpetrator and the Victim in Portuguese Cases of
Felicide
Fatima Almeida, MSc; Duarte N. Vieira, PhD, MD*

11:30 a.m. - 1:00 p.m.  I18  Death Due to Neglect in the Elderly: A Sad Reality
Isabella Aquila, MD*; Fiorella Caputo, MD; Silvia Boca; Salvatore Savastano;
Pietrantonio Ricci

Sexual Offenders and Sexual Behaviors

Moderator:  Karen B. Rosenbaum, MD
            New York, NY

Co-Moderator:  Christopher R. Thompson, MD
               Los Angeles, CA

1:00 p.m. - 1:15 p.m.  I19  Critique of New Sex Offender Management in California: Assessment, Containment, and
Treatment
Susie Morris, MD*

1:15 p.m. - 1:30 p.m.  I20  Evaluation of Sexual Abuse Crimes Committed By Teachers Against Students in
Terms of Socio-Demographic Characteristics and Related Parameters
Fatih Yagmur*; Mustafa Çeltek, MD; Taha Yasin Arslan; Hüseyin Keles; Alperen Bıkmazer;
Harun Akkaya, MD

1:30 p.m. - 3:00 p.m.  I21  Assessment and Treatment of Problematic Sexual Behaviors: An Update
J. Paul Fedoroff, MD*; R. Gregg Dwyer, MD, EdD*

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 3:35 p.m.  I22  Transgender Inmates: Considerations in Placement, Management, and Treatment in
Correctional Facilities
Jennilee Tuazon, MD*

*Presenting Author
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<th>Time</th>
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<tr>
<td>3:35 p.m.</td>
<td>I23</td>
<td>Zoophilia and the Law in the United States: Legal Responses to a Rare Paraphilia</td>
<td>Brian J. Holoyda, MD*; William Newman, MD</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>I24</td>
<td>A Pilot Study Comparing Hands-On and Hands-Off Child Pornography Consumers</td>
<td>Sebastien Prat, MD*; Heather M. Moulden, PhD; Carol Jonas, PhD; Gary A. Chaimowitz, MD</td>
</tr>
<tr>
<td>4:20 p.m.</td>
<td>I25</td>
<td>Pedophilia: A Crime or a Disease? How Should the Courts Address This Problem? A Case Study</td>
<td>Thomas V. Brady, DMD*</td>
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<td>4:50 p.m.</td>
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<td>Questions &amp; Answers</td>
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<tr>
<td>8:30 a.m.</td>
<td>I26</td>
<td>Incapacity of the Mind Secondary to Medication Misuse as a Not Criminally Responsible (NCR) Defense</td>
<td>Sebastien Prat, MD*; Bruno Losier, PhD; Heather M. Moulden, PhD; Gary A. Chaimowitz, MD</td>
</tr>
<tr>
<td>8:50 a.m.</td>
<td>I27</td>
<td>Extreme Emotional Disturbance Defense: From the Heat of Passion to a Reasonable Explanation</td>
<td>Megan M. Mroczkowski, MD*; Christopher Racine, MD, MPH*; Danielle Kushner, MD*; Karen B. Rosenbaum, MD*; Eric Goldsmith, MD*</td>
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<tr>
<td>9:20 a.m.</td>
<td>I28</td>
<td>The Power of Intuition in Deception Detection</td>
<td>Christopher Fischer, MD*</td>
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<tr>
<td>9:40 a.m.</td>
<td>I29</td>
<td>Contemporaneous Assessments of Testamentary Capacity and Undue Influence: Strike While the Iron Is Hot</td>
<td>Daniel A. Martell, PhD*</td>
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<td>Questions &amp; Answers</td>
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<td>10:15 a.m.</td>
<td>I30</td>
<td>Unintentional Child Neglect: Literature Review and Observational Study</td>
<td>Emily Friedman, BS*; Stephen B. Billick, MD*</td>
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**Friday**

**Crime and the Courts**

**Moderator:** Eleanor B. Vo, MD  
OmaDesala Psychiatric Services  
Ewing, NJ

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**Child and Adolescent Issues**

**Moderator:** Eleanor B. Vo, MD  
OmaDesala Psychiatric Services  
Ewing, NJ

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<td>I30</td>
<td>Unintentional Child Neglect: Literature Review and Observational Study</td>
<td>Emily Friedman, BS*; Stephen B. Billick, MD*</td>
</tr>
</tbody>
</table>
11:15 a.m. - 11:35 a.m.  I31  Assessing and Addressing Preteen Violence  
John L. Young, MD*

11:35 a.m. - 12:00 p.m.  I32  Perception of Police Among Adolescents in Istanbul  
Mine Özasçılar*; Neylan Ziyalar

12:00 p.m. - 1:00 p.m.  Lunch

White-Collar Crime

Moderator:  R. Gregg Dwyer, MD, EdD  
Medical University of South Carolina  
Community & Public Safety Psychiatry Division  
Charleston, SC

1:00 p.m. - 3:00 p.m.  I33  Behavioral Characteristics and Personality Traits of the White-Collar Organized Criminal and the White-Collar Organized Community  
Janet M. Schwartz, PhD*

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 4:30 p.m.  I33  Behavioral Characteristics and Personality Traits of the White-Collar Organized Criminal and the White-Collar Organized Community  
Janet M. Schwartz, PhD*

Saturday

Murder and Suicide

Moderator:  Lauren Reba-Harrelson, PhD  
Columbus, GA

Co-Moderator:  Janet M. Schwartz, PhD  
Forensic Fraud Research, Inc.  
Canton, OH

9:00 a.m. - 9:30 a.m.  I34  Honor-Based Violence: A Cultural Problem!  
Mete K. Gulmen, PhD, MD*; Sunay Fırat, PhD

9:30 a.m. - 10:00 a.m.  I35  Paternal Filicide for Spousal Revenge: The Male Side of Medea’s Syndrome in the Italian Population Over the Last Ten Years  
Federica Collini*; Angelo Giuseppe De’Micheli, MD; Isabella Merzagora Betsos, PhD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 10:45 a.m.  I36  Suicide Among Turkish Police Officers From 2003 to 2013  
Neylan Ziyalar; Mine Özasçılar*; Can Çalıcı; Davut Acar

10:45 a.m. - 11:20 a.m.  I37  Parricides and Crime Scene Behaviors — Do They Tell the Story?  
Wade C. Myers, MD*; Eleanor B. Vo, MD*

*Presenting Author
11:20 a.m. - 11:50 a.m.  138  Suicide by Suffocation: A Case Report of an Elderly Woman Who Completed Suicide by Suffocation
Cynthia Rutherford, DO*; Amina Ali, MD*; Panagiota Korenis-Rios, MD*

11:50 a.m. - 12:00 p.m.  Questions & Answers
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  
**J1** Developments and Validations of TD-GC/MS and HPLC Methods for the Identification of Ballpoint Pen Ink Components: Study of Their Decomposition on Aging  
*Dilek Salkim Islek, MSc; Esra Isat, BSc; Burak H. Gungor, MSc; Salih Cengiz, PhD*

11:30 a.m. - 1:00 p.m.  
**J2** Carbon Black Nanoparticles and Graphene Oxide-Embedded Thin Sol-Gel Film for Analysis of Dye Molecules in Writing Inks by Laser Desorption/Ionization Mass Spectrometry  
*Seung-Hoon Bahng, MS*; *Sangwon Cha, PhD*

Thursday

**Moderator:** Carl R. McClary, BA  
**Co-Moderator:** John L. Sang, MS  
Atlanta, GA  
Glen Head, NY

8:30 a.m. - 10:30 a.m.  
**J3** Frequency Occurrence of Handwriting and Hand Printing Characteristics  
*Ellen M. Schuetzner, BA*; *Thomas W. Vastrick, BS*; *Mark Johnson, PhD*; *Kevin P. Kulbacki, MSFS*

10:30 a.m. - 10:45 a.m.  
Break

10:45 a.m. - 11:00 a.m.  
**J4** Natural Variation in Modern Handwriting  
*Jane A. Lewis, MFS*

11:00 a.m. - 11:20 a.m.  
**J5** Different Writer or Alternate Writing Style — A Case Review  
*Charles L. Haywood, MFS*

11:20 a.m. - 11:45 a.m.  
**J6** Development of Individual Handwriting Characteristics in ~1,500 Students: Statistical Analysis and Likelihood Ratios That Emerge Over an Extended Period of Time  
*Lisa M. Hanson, BS*; *Kirsten A. Singer, MFS*

11:45 a.m. - 12:00 p.m.  
**J7** Development of a Supplemental Technique to Increase Visualization of Handwriting Indentations in Crumpled Documents With the Use of an Electrostatic Detection Device (EDD)  
*Kate Butler, BS*

12:00 p.m. - 1:00 p.m.  
Lunch

*Presenting Author
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<tr>
<td>1:00 p.m.</td>
<td>J8</td>
<td>Cut-and-Paste Manipulation of a Quitclaim Deed</td>
<td>Farrell C. Shiver, MS</td>
</tr>
<tr>
<td>1:15 p.m.</td>
<td>J9</td>
<td>Using Video Spectral Comparator (VSC) to Examine Documents Previously Subjected to Latent Print Examination</td>
<td>Robert H. Negherbon, MS; Jennifer A. Ward-Trupp, BA*</td>
</tr>
<tr>
<td>1:25 p.m.</td>
<td>J10</td>
<td>Conductive Inks and the Electrostatic Detection of Indentations</td>
<td>Kevin P. Kulbacki, MSFS*</td>
</tr>
<tr>
<td>1:40 p.m.</td>
<td>J11</td>
<td>Case Studies of Simulated Security Features in United States Identity Documents</td>
<td>Hillary M. Hoover, MFS*</td>
</tr>
<tr>
<td>1:55 p.m.</td>
<td>J12</td>
<td>Factors Affecting Electrostatic Detection Apparatus — 2 (ESDA2) Indented Writing Visualization</td>
<td>Nina A. Harnarine*; John Jacobs, BAA; Dave Juck; Tracy Rogers, PhD</td>
</tr>
<tr>
<td>2:10 p.m.</td>
<td>J13</td>
<td>Analysis Techniques of Plastic Identity Documents</td>
<td>Stephanie A. Kingsbury, MFS*</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>J14</td>
<td>Are the Principles of Forensic Signature Identification Corroborated by an Analysis of Digitally Captured Biometric Data?</td>
<td>William J. Flynn, BS; Kathleen Annunziata Nicolaides, BA*</td>
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<tr>
<td>2:45 p.m.</td>
<td>Break</td>
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<tr>
<td>3:00 p.m.</td>
<td>J15</td>
<td>The Universal Coded Character Set (ISO/IEC 10464) and the Unicode Standard as Aids to Forensic Document Examination in an International and Transnational Environment</td>
<td>Peter V. Tytell, BA*</td>
</tr>
<tr>
<td>3:20 p.m.</td>
<td>J16</td>
<td>Collaborative Radiography (and Other Interdisciplinary Activities) Between Document Analysts and Forensic Anthropologists at the FBI Laboratory</td>
<td>Angi M. Christensen, PhD*; Gabriel D. Watts, BA; Gregg M. Mokrzycki, BA, MFS</td>
</tr>
<tr>
<td>3:35 p.m.</td>
<td>J17</td>
<td>Characterization and Discrimination of Inkjet Printer Inks Using Micro-Raman Spectroscopy</td>
<td>Patrick Buzzini, PhD*; Alyshia K. Meyers, BS</td>
</tr>
<tr>
<td>3:55 p.m.</td>
<td>J18</td>
<td>A Novel Automated, Searchable Database for the Chemical Characterization and Comparison of Printing Inks</td>
<td>Tatiana Trejos, PhD*; Peter Torrione, PhD; Ruthmara Corzo, BSc; Paul Martin, PhD; Anna Raeva, PhD; Kiran Subedi; Rhett J. Williamson; Jong Yoo, PhD; Jose R. Aimall, PhD</td>
</tr>
<tr>
<td>4:10 p.m.</td>
<td>J19</td>
<td>Computer-Scored Test Answer Marks, A.K.A. Bubble Marks: How Individual Are They?</td>
<td>Janet F. Masson, BJ*</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>J20</td>
<td>Another Look at Ink and Toner Intersections: A Word of Caution</td>
<td>Laura A. Mancebo, BS*; Dennis J. Ryan, MBA</td>
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## QUESTIONED DOCUMENTS

### Friday

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<tr>
<td>4:45 p.m. - 5:00 p.m.</td>
<td><strong>J21 The Origin of a Tracing</strong></td>
<td>Donald D. Moryan, BS*</td>
</tr>
<tr>
<td>8:30 a.m. - 8:50 a.m.</td>
<td><strong>J22 Document Examination For Non-Document Examiners</strong></td>
<td>Gregory A. McNally, BS*</td>
</tr>
<tr>
<td>8:50 a.m. - 9:05 a.m.</td>
<td><strong>J23 Addressing Admissibility Challenges to Forensic Document Examination From Both a Federal and a State Examiner’s Perspective</strong></td>
<td>Carl R. McClary, BA*; Karen J. Nobles, BA*</td>
</tr>
<tr>
<td>9:05 a.m. - 9:25 a.m.</td>
<td><strong>J24 The American Dreyfus Affair: Parallels between the Alfred Dreyfus and the Leo Frank Matters in America</strong></td>
<td>Arthur T. Anthony, BS*</td>
</tr>
<tr>
<td>9:25 a.m. - 9:40 a.m.</td>
<td><strong>J25 Standardization of Conclusions: Meeting Current Needs</strong></td>
<td>Thomas W. Vastrick, BS*</td>
</tr>
<tr>
<td>9:40 a.m. - 9:55 a.m.</td>
<td><strong>J26 A New-Dominant Hand: Training the Non-Dominant Hand to Perform the Complex Task of Handwriting</strong></td>
<td>Brenda N. Lanners, BS*</td>
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<tr>
<td>9:55 a.m. - 10:10 a.m.</td>
<td>Break</td>
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<tr>
<td>10:10 a.m. - 10:30 a.m.</td>
<td><strong>J27 The Reliability of Hand Printing Identification by the Forensic Document Examiner</strong></td>
<td>Linda L. Mitchell, BS*; Mara L. Merlino, PhD*</td>
</tr>
<tr>
<td>10:30 a.m. - 10:55 a.m.</td>
<td><strong>J28 Some Reasons for Qualified Conclusions</strong></td>
<td>Ronald N. Morris, BS*</td>
</tr>
<tr>
<td>10:55 a.m. - 11:10 a.m.</td>
<td><strong>J29 Forensic Document Examiner (FDE) Testimony Related to Quality Processes Denied — What a Florida Jury Did Not Hear and More (or Less)</strong></td>
<td>Grant R. Sperry, BS*</td>
</tr>
<tr>
<td>11:10 a.m. - 11:35 a.m.</td>
<td><strong>J30 The Forensic Document Examiner Testimony List</strong></td>
<td>Ellen M. Schuetzner, BA*</td>
</tr>
<tr>
<td>11:35 a.m. - 12:00 p.m.</td>
<td><strong>J31 The Scientific Working Group for Forensic Document Examination (SWGDOC) and the Organization of Scientific Area Committees (OSAC) Process</strong></td>
<td>Ted M. Burkes, BS*; F.L. Jim Lee, Jr., MS*</td>
</tr>
<tr>
<td>12:00 p.m. - 1:00 p.m.</td>
<td>Lunch</td>
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*Presenting Author 2015

ORLANDO

QUESTED DOCUMENTS

ORLANDO 2015
Multidisciplinary Session Part I: Criminalistics Session III/General/Questioned Documents

Moderator: Charlotte A. Wacker, MS  
City & County of Honolulu  
Dept of the Medical Examiner  
Honolulu, HI  
Co-Moderator: Gulnaz T. Javan, PhD  
Alabama State University  
Forensic Science Program  
Montgomery, AL

1:00 p.m. - 1:20 p.m.  
E67 Organization of Scientific Area Committees (OSAC) Forensic Science Standards Activities: Helping Each Other and Stimulating the Future  
John Paul Jones II, MBA*

1:20 p.m. - 1:45 p.m.  
E68 A Step Toward Likelihood Ratios in Pattern Recognition Disciplines  
Simone Gittelson*

1:45 p.m. - 2:15 p.m.  
E69 Reliability, Validity, Accuracy, and Bias in Forensic Document Examination: An Interdisciplinary Approach to Understanding Forensic Decision-Making Processes and Outcomes  
Mara L. Merlino, PhD*; Tierra M. Freeman, PhD*; Veronica B. Dahir, PhD; Victoria Springer, PhD; Derek L. Hammond, BA; Adrian G. Dyer, PhD; Bryan Found, PhD

2:15 p.m. - 2:30 p.m.  
Break

Multidisciplinary Session Part II: Criminalistics Session III/General/Questioned Documents

Moderator: Jean M. Snider  
Hope Mills, NC  
Co-Moderator: Don R. Ledbetter, BS  
Seattle Police Department  
Seattle, WA

2:30 p.m. - 2:45 p.m.  
E70 Scientific Area Committee for Physics and Pattern Evidence  
R. Austin Hicklin, MS*

2:45 p.m. - 3:15 p.m.  
E71 Objective and Quantifiable Metrics for the Determination of Latent Print “Suitability”  
Henry J. Swofford, MSFS*; Anthony Koertner, BS; Michael J. Salyards, PhD

3:15 p.m. - 3:45 p.m.  
E72 Cognitive Profiling of Latent Fingerprint Examiners  
Itiel Dror, PhD; Melissa K. Taylor, BA*

3:45 p.m. - 4:30 p.m.  
E73 Tips for the Courtroom: How to Get the Most Out of the Expert Witness  
Stephanie Domitrovich, JD, PhD*; Jeffrey M. Jentzen, MD*

4:30 p.m. - 5:00 p.m.  
Discussion
Wednesday

Toxicology Section Awardees Recognition (by invitation only)

6:30 p.m. - 7:30 p.m.  
Supported by: Aegis Sciences Corporation

Poster Session

Moderator: Sarah K. Himes, BS  
National Institute on Drug Abuse/NIH  
Baltimore, MD

Co-Moderator: Kayla N. Ellefsen, MS  
National Institute on Drug Abuse/NIH  
Biomedical Research Center  
Baltimore, MD

Toxicology Best Poster Award Supported by: RTI International

7:30 p.m. - 9:00 p.m.  
K1 A Reduced Workflow Solution for the Analysis of Gamma-Hydroxybutyrate (GHB) in Human Hair Samples Via an Automated Bead Mill as a Precursor to High Resolution-Gas Chromatography/Time-of-Flight (GC/TOF) and 2D Gas Chromatography/Time-of-Flight (GCxGC/TOF)  
Brittany M. Watt, BA*; David Alonso, PhD; Joe Binkley, PhD; Jeff Patrick, PhD; Frank Kero, PhD; Victor Vandell, PhD; Elena Gairloch, BS; M. Brad Nolt, MS; Tom Enzweiler, BS; Rhys Jones, PhD; Lee Williams, PhD; Karen S. Scott, PhD

7:30 p.m. - 9:00 p.m.  
K2 A Novel Extraction Methodology for the Analysis of Lorazepam and Oxazepam Glucuronide Hydrolysis in Meconium  
Kaylee R. McDonald, BS*; William E. Brewer, PhD; Stephen L. Morgan, PhD

7:30 p.m. - 9:00 p.m.  
K3 Analysis of Promethazine, Chlorpromazine, and Selected Metabolites in Decomposed Skeletal Tissues by Microwave-Assisted Extraction/Microplate Solid Phase Extraction/Ultra High-Performance Liquid Chromatography (MAE/MPSPE/UHPLC)  
Courtney A. Campbell, BS*; James Watterson, PhD; Caroline C. Bett, MSc

7:30 p.m. - 9:00 p.m.  
K4 Detection of Trace Buprenorphine and Norbuprenorphine in Human Hair Using Enzyme-Linked Immuno-Sorbent Assay (ELISA)  
Irene Shu*; Valentina Sagnia, BS; Joseph Jones, MS

7:30 p.m. - 9:00 p.m.  
Sara Dempsey, BS*; Justin L. Poklis, BS; Carl E. Wolf II, PhD; Alphonse Poklis, PhD

7:30 p.m. - 9:00 p.m.  
K6 Identification of Synthetic Cathinones From Electron Impact Mass Spectra  
Rebecca J. Ponsini, MS*; Sarah Kerrigan, PhD

7:30 p.m. - 9:00 p.m.  
K7 Investigation of Unknown Designer Drugs and Metabolites in Urine Collected From Electronic Dance Music (EDM) Attendees  
Jillian K. Yeakel, MS*; Amanda L.A. Mohr, MSFS; John J. Kristofic, BS; Barry K. Logan, PhD

*Presenting Author
<table>
<thead>
<tr>
<th>Time</th>
<th>Presenting Author(s)</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>Craig Leopold, BS*; Sherri L. Kacinko, PhD; Barry K. Logan, PhD; Karen S. Scott, PhD</td>
<td><strong>K8</strong> Development of a Quantitation Method for Synthetic Cannabinoid Metabolites in Urine Using Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>Amanda L.A. Mohr, MSFS*; Jillian K. Yeakel, MS; Melissa Frisica, MSFS; Barry K. Logan, PhD</td>
<td><strong>K9</strong> Recreational Drug Use Trends and Emerging Analytes Identified in Blood, Urine, and/or Oral Fluid From Attendees at an Electronic Dance Music (EDM) Festival</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>Pinar Efeoglu, MS*; Nebile G. Daglioglu, PhD; Mete K. Gulmen, PhD, MD; Ismail E. Goren, BS; Ahmet Hilal, MD</td>
<td><strong>K10</strong> Evaluation of Cases Admitted to Cukurova University Forensic Toxicology Laboratory From June 2009 to June 2014: A Retrospective Study</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>Stephen J. Melito, DO*; Donna M. Papsun, MS; Daniel S. Isenschmid, PhD</td>
<td><strong>K11</strong> Analysis of the Anticoagulant Brodifacoum in Serum After an Incident of Pesticide Poisoning</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>Jeffery Hackett, PhD*; Albert A. Elian, MS*</td>
<td><strong>K12</strong> Effect of Sunlight on Methamphetamine in Urine</td>
</tr>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>Kristin E. Wegner, BS*; Nicholas B. Tiscione, MS</td>
<td><strong>K13</strong> Analysis of Buprenorphine, Norbuprenorphine, Naloxone, and Their Glucuronides From the Urine Obtained in Drug and Driving Cases</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>Kiyotaka Usui*; Koichi Saito; Tetsuo Kokaji; Tomomi Aramaki; Masato Funayama</td>
<td><strong>K14</strong> Validation of the Neogen® Enzyme-Linked Immuno-Sorbent Assay (ELISA) Fentanyl Ready-to-Use (RTU) Kit for Whole Blood and Urine Specimens</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>Heather M. Cornthwaite, MSc*; Caroline C. Betit, MSc; James Watterson, PhD</td>
<td><strong>K15</strong> Detection of Amitriptyline and Nortriptyline in Decomposed Skeletal Tissues by Microwave-Assisted Extraction and Ultra High-Performance Liquid Chromatography</td>
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<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>Sarah Kerrigan, PhD; Tracy Gastineau, MS*</td>
<td><strong>K16</strong> A Validated Method for the Determination of Salvinorin A and Salvinorin B in Forensic Toxicology Samples</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>Jennifer Leach*; Thomas A. Brettell, PhD; Brandi Skymba</td>
<td><strong>K17</strong> Quantitative Analysis of Methylphenidate (Ritalin®) and Ritalinic Acid in Oral Fluid by Liquid Chromatography/Triple Quadrupole/Mass Spectrometry (LC/QqQ/MS)</td>
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</table>

*Presenting Author
7:30 p.m. - 9:00 p.m. **K20** Assessment of Three Time-of-Flight/Mass Spectrometry (TOF/MS) Drug Screening Technologies Using Different Fragmentation Modes
Helen Piper, BS*; Alexander L. Maggitti III, BS; Jared Castellani, BS; Francis X. Diamond, BS; Matthew M. McMullin, MS; Barry K. Logan, PhD

7:30 p.m. - 9:00 p.m. **K21** Analysis of Phosphide Zinc and Aluminium Phosphate
Geetanjli Sachdeva, MSc*

7:30 p.m. - 9:00 p.m. **K22** A Total Sample Preparation Screening Solution for Acidic, Neutral, and Basic Drugs Using ISOLUTE® Multimode Solid Phase Extraction (SPE) Prior to High-Performance Liquid Chromatography WithTandem Mass Spectrometry (HPLC/MS/MS) Analysis
Victor Vandell, PhD*; Frank Kero, PhD

7:30 p.m. - 9:00 p.m. **K23** Adulterants and Diluents in Urine Samples After Consumption of Cocaine: What Compounds Are Typically Found by Liquid Chromatography (LC) Combined With High-Resolution Tandem Mass Spectrometry (HRMS/MS)?
Werner Bernhard, DSc*; Stefan Koenig, PhD; Franziska Penitschka, BSc; Lars Ambach, MSc; Susanne Nussbaumer, PhD; Wolfgang Weinmann, PhD

7:30 p.m. - 9:00 p.m. **K24** Impact of Novel Accurate Mass MS/MS Acquisition and Processing Techniques on Forensic Toxicological Screening
Adrian M. Taylor, MSc, PhD*

7:30 p.m. - 9:00 p.m. **K25** Analysis of Acetyl Fentanyl in Postmortem Blood and Urine Specimens by Gas Chromatography/Mass Spectrometry (GC/MS)
Marissa J. Finkelstein, BA*; Chris W. Chronister, PhD; Christina Stanley, MD; Laurie M. Ogilvie, MS; Bruce A. Goldberger, PhD

7:30 p.m. - 9:00 p.m. **K26** Postmortem Distribution of Acetyl Fentanyl
Xiang Zhang, MD*; Rebecca Jufer Phipps, PhD; Barry S. Levine, PhD; Patricia Aronica, MD; James Locke; Melissa A. Brassell, MD; Wendy S. Warren, DO; Mary G. Ripple, MD; David R. Fowler, MD

7:30 p.m. - 9:00 p.m. **K27** Fatal Intoxication With Acetyl Fentanyl
Susan M. Cunningham, MCJ*; Kristen M. Bailey, MS*; Christina L. Newsome-Sparks, BS; Myron A. Gebhardt, MS; David J. Clay, BA; Susan E. Venuti, MD; Nabila A. Haikal, MD; James C. Kramer, PhD

7:30 p.m. - 9:00 p.m. **K28** Trazodone and M-Chlorophenylpiperazine (m-CPP) Concentrations in Postmortem Blood
C. Richard Crooks, PhD*; David M. Schwope, PhD; Jana A. James, MS

7:30 p.m. - 9:00 p.m. **K29** A Case of Suicide Using Veterinary Drug T-61® With Subsequent Submergence in the Sea
Claudia Trignano*; Maria Nieddu, BS; Antonio Nieddu, MD; Santina Cantatore; Stefania C. Bello, MD; Margherita Neri, MD, PhD
7:30 p.m. - 9:00 p.m.  **K30**  Development and Validation of a Method Using Gas Chromatography/Mass Spectrometry (GC/MS) After Liquid-Liquid Extraction (LLE) for the Detection and Quantification of Clotiapine in Blood and Urine and Its Application to a Postmortem Case
Giulio Mannocchi*; Flaminia Pantano*; Roberta Tittarelli; Miriam Catanese; Federica Umani Ronchi; Francesco P. Busardo, MD

7:30 p.m. - 9:00 p.m.  **K31**  Pesticide Poisoning Deaths in Istanbul and Nearby Cities in Turkey
Erdoğan Özdemir*; Yigit Sezer; Yusuf Özer; Sefa Celiç; Sermet Koc

7:30 p.m. - 9:00 p.m.  **K32**  The Role of Cytochrome P450 2B6 (CYP2B6) Genetic Polymorphisms in Unexpected Methadone Fatalities
Taha Ahmad, MSFS*; Samit Sabet; Lauren L. Richards-Waugh, PhD; Gary O. Rankin, PhD

7:30 p.m. - 9:00 p.m.  **K33**  A Case of Suicide Due to Oral Ingestion of Phorate Revealed by Gas Chromatography/Mass Spectrometry (GC/MS): A Contribution to Clarify the Human Toxicokinetic and the Mechanism of Death
Marco Savito, MD*; Carmela Fiore, MD; Palmira Fortareza, MS; Angelo Montana, MD; Cristoforo Pomara, MD, PhD

7:30 p.m. - 9:00 p.m.  **K34**  Heroin-Related Deaths in the West of Scotland Between 2008 and 2011
Carlijn van der Sluijs, MSc*; Tony Martin, PhD; Karen S. Scott, PhD

7:30 p.m. - 9:00 p.m.  **K35**  Analysis of N-Bombs: Quantitation of NBOMe-type Novel Psychoactive Substances (NPS) in Biological Fluids by Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)
Donna M. Papsun, MSc*; Heidi Schimmelschuch, BS; Barry K. Logan, PhD

7:30 p.m. - 9:00 p.m.  **K36**  Phencyclidine (PCP) in San Francisco: A Review of 50 Postmortem and Human Performance Toxicology Cases Between 1997 and 2013
Alexander C. San Nicolas, MSFS*; Nikolas P. Lemos, PhD

7:30 p.m. - 9:00 p.m.  **K37**  Determination of Methamphetamine Concentrations in Thighbones Buried in Soil
Ken-ichiro Nakao, MS*; Kazuhiko Kibayashi, MD*

7:30 p.m. - 9:00 p.m.  **K38**  Supported Liquid Extraction (SLE) as a New Technique for the Clean-Up of Hair Extracts Containing Drugs of Abuse
Jakub Klobut, MSc*; Frank Kero, PhD; Amanda L.A. Mohr, MSFS; Karen S. Scott, PhD

7:30 p.m. - 9:00 p.m.  **K39**  Surface-Enhanced Raman Analysis of Synthetic Cannabinoids Using Gold Nanoparticles and Various Aggregating Agents
Thaddeus Mostowit, MFS*; Bruce R. McCord, PhD

7:30 p.m. - 9:00 p.m.  **K40**  Characterization of Binding of Ricin Toxin to Cultured Human Lung Cell Line A549
Oluseyi A. Vanderpuye, PhD, BS*; Jaderica A. Smith, BS; James J. Hardy, BS

*Presenting Author
Thursday

Annual Lectureship in Toxicology — Multidisciplinary Session: Toxicology/Psychiatry & Behavioral Science

Moderator: Dan T. Anderson, MS  
Los Angeles County Dept of ME-Coroner  
Los Angeles, CA

Co-Moderator: Dean M. De Crisce, MD  
Special Treatment Unit-Annex  
Avenel, NJ

8:00 a.m. - 8:20 a.m. K41 The Psychological Autopsy: Psychiatry & Behavioral Science and Toxicology in a Working Relationship — Suicide—A General Overview  
Dean M. De Crisce, MD*

8:20 a.m. - 8:40 a.m. K42 The Psychological Autopsy: Psychiatry & Behavioral Science and Toxicology in a Working Relationship — Medicines of the Mind  
Dan T. Anderson, MS*

8:40 a.m. - 9:05 a.m. K43 The Psychological Autopsy: Psychiatry & Behavioral Science and Toxicology in a Working Relationship — Psychological Autopsy and the Assessment of Motive  
Michael Welner, MD*; Dan T. Anderson, MS

9:05 a.m. - 9:30 a.m. K44 The Psychological Autopsy in Practice: Applying Behavioral Science to Mode-of-Death Investigations and a Case Study  
Lauren Reba-Harrelson, PhD*

9:30 a.m. - 9:45 a.m. K45 The Psychological Autopsy as an Aid to Scientific Investigation: The Application of the Italian Model to a Cold Case Murder  
Laura Volpini, PhD*; Luciano Garofano, PhD*; Jacopo Taloni, MS; Cristina Mazza

9:45 a.m. - 10:15 a.m. Break  
Supported by: Aegis Sciences Corporation

Special Session: Driving Under the Influence of Drugs

Moderator: William R. Johnson, BA  
Wisconsin State Lab of Hygiene  
Toxicology Section  
Madison, WI

Co-Moderator: Christine Moore, PhD, DSc  
Immunalysis Corporation  
Pomona, CA

10:15 a.m. - 10:40 a.m. K46 Utility of Oral Fluid in Driving Under the Influence of Drugs (DUID) Investigations  
Christine Moore, PhD, DSc*

10:40 a.m. - 11:00 a.m. K47 An Evaluation of Oral Fluid Testing Devices During Drug Influence Evaluations  
Kyle J. Clark, MA*

11:00 a.m. - 11:15 a.m. K48 The Perilous Practice of Predicting the Past: Does Retrograde Extrapolation Accurately Predict Prior Blood Alcohol Level?  
Ronald L. Moore, JD*

*Presenting Author
TOXICOLOGY

11:15 a.m. - 11:30 a.m. K49 Evaluation of the Impact of Expanding Enzyme-Linked Immuno-Sorbent Assay (ELISA) Screening in Driving Under the Influence of Drugs (DUID) Investigations
Aileen Lu, HBSc*; Karen S. Scott, PhD; Ayako Chan-Hosokawa, MS; Barry K. Logan, PhD

11:30 a.m. - 11:45 a.m. K50 Sleep-Driving Is a Nightmare: Driving Under the Influence of Zolpidem Cases in Colorado
Sarah Urfer, MS*; Jaime Morton

11:45 a.m. - 12:00 p.m. K51 Synthetic Cannabinoids in Operating While Intoxicated (OWI) Casework: Field Observations and Outsourced Testing
William R. Johnson, BA*

12:00 p.m. - 1:00 p.m. Lunch

Designer Drugs

Moderator: Sarah Kerrigan, PhD
Sam Houston State University
Huntsville, TX

Co-Moderator: Sumandeep Rana, PhD
Redwood Toxicology Laboratory
Santa Rosa, CA

1:00 p.m. - 1:15 p.m. K52 Development of an Analytical Method for Nootropic “Smart” Drugs in Biological Fluids
Mollie Mares, BS*; Karen S. Scott, PhD; Donna M. Papsun, MS; Barry K. Logan, PhD

1:15 p.m. - 1:30 p.m. K53 Adverse Effects of Synthetic Cannabinoids: A Case-Oriented Review
Susan M. Gurney, PhD*; Karen S. Scott, PhD; Sherri L. Kacinko, PhD; Brandon C. Presley, BS; Barry K. Logan, PhD

1:30 p.m. - 1:45 p.m. K54 4-Methoxy-A-PVP: In Silico Metabolite Prediction, Assessment of Metabolic Stability With Human Liver Microsomes, and Metabolite Identification After Human Hepatocyte Incubation With High Resolution-Mass Spectrometry
Kayla N. Ellefsen, MS*; Madeleine J. Swortwood, PhD; Ariane Wohlfarth, PhD; Marta Concheiro-Guisan, PhD; Marilyn A. Huestis, PhD

1:45 p.m. - 2:00 p.m. K55 Identification of Major Metabolites in Human Blood and Urine Associated With the Ingestion of Alpha-Pyrrolidinopentiophenone (Alpha PVP)
Melissa Friscia, MSFS*; Sarah E. Wolf; Amanda L.A. Mohr, MSFS; Francis X. Diamond, BS; Jillian K. Yeakel, MS; Barry K. Logan, PhD

2:00 p.m. - 2:15 p.m. K56 Characterization of AB-FUBINACA Metabolites in Rat Urine by Liquid Chromatography/Time-of-Flight/Mass Spectrometry (LC/TOF/MS)
Ashraf Mozayani, PharmD, PhD*; Aiyiike Dip, PhD; Hsinhung Chen; Amruthesh Shivachar, PhD; Munder Zagaar, PhD; Jeffrey Walterscheid, PhD

2:15 p.m. - 2:30 p.m. K57 Broad Detection of Synthetic Cannabinoids in Whole Blood Using Ultra High-Performance Liquid Chromatography-Quadrupole-Time-of-Flight (UHPLC-Q-TOF)
Robert Kronstrand, PhD*; Cassandra Jaque, BSc; Markus Roman, BS

2:30 p.m. - 3:00 p.m. Break
Supported by: Lipomed, Inc.
General Toxicology

Moderator: Marilyn A. Huestis, PhD
Chemistry & Drug Metabolism
Intramural Research, NIDA, NIH
Baltimore, MD

3:00 p.m. - 3:15 p.m. K58 Sleeping With the Enemy: Zolpidem in Driving Under the Influence (DUI) and Postmortem Cases
Charlotte A. Baker, PhD*

3:15 p.m. - 3:30 p.m. K59 Pyrimethamine Toxicity: A Case Report
Steven Marcus, MD; Numan Butt, MD; Sherri L. Kacinko, PhD*

3:30 p.m. - 3:45 p.m. K60 Ethyl Glucuronide, Ethyl Sulfate, and Nicotine and Metabolites Quantified in Human Fetal Liver From Electively Terminated Pregnancies
Sarah K. Himes, BS; Karl B. Scheidweiler, PhD; Susan Fairley, PhD; Panagiotis Filis, PhD; Alex Douglas, PhD; Peter J. O'Shaughnessy, PhD; John P. Iredale, MD, PhD; David Hay, PhD; Paul A. Fowler, PhD; Marilyn A. Huestis, PhD*

3:45 p.m. - 4:00 p.m. K61 The Egg Roll Driving Under the Influence (DUI) Defense: A Unique DUI Defense Incorporating Slow Gastric Emptying Due to the Presence of Egg Rolls, Followed by Rapid Gastric Emptying Due to Vehicle-Collision Impact
Deborah R. Stonebarger, BS*

4:00 p.m. - 4:15 p.m. K62 Determination of Gamma-Hydroxybutyric Acid (GHB) in Hair Using Alternative Derivatization Techniques
Brittany M. Watt, BA*; Edward J. Barbieri, PhD; Melissa Frisica, MSFS; Karen S. Scott, PhD

4:15 p.m. - 4:30 p.m. K63 Cannabinoid Disposition in Oral Fluid After Controlled Cannabis Vaporizer Administration
Rebecca L. Hartman, BA*; Moonhee Jang, PhD; Andrew L. Spurgin, PharmD; Keming Yun, PhD; David A. Gorelick, MD, PhD; Gary Milavetz, PharmD; Timothy L. Brown, PhD; Gary Gaffney, MD; Marilyn A. Huestis, PhD

Toxicology Open Forum

7:00 p.m. - 9:00 p.m. Supported by: SPEware Corporation

*Presenting Author
Friday

Multidisciplinary Session: Pathology/Biology Session II/Toxicology

Moderator: Meredith A. Lann, MD
OME
Denver, CO

8:15 a.m. - 8:30 a.m. H120 Marijuana Edible Consumption as a Contributing Factor in Death: Two Cases and Live Anecdotal Accounts
Dawn B. Holmes, MD*; Meredith A. Lann, MD; Billie-Jo Naysmith, BS; Sarah Urfer, MS; James L. Caruso, MD

8:30 a.m. - 8:45 a.m. K64 Case Report of a Death Involving the Designer Opioid MT-45 Raises the Spectre of Synthetic Opioids in Forensic Casework
Donna M. Papsun, MS*; Alison Krywanczyk, MD*; James C. Vose, BA; Elizabeth A. Bundock, MD, PhD; Barry K. Logan, PhD

8:45 a.m. - 9:00 a.m. K65 The Art of Embalming vs. the Science of Forensic Toxicology
Sonia Cuevas, BS; Wendy Santiago-Tirado, BS; Marina Stajic, PhD*

9:00 a.m. - 9:15 a.m. H121 Poor Man’s Methadone: A Case Report of Loperamide Toxicity
Jennifer Dierksen*; Morna L. Gonsoulin, MD; Jeffrey Walterscheid, PhD

9:15 a.m. - 9:30 a.m. K66 Case Study: A Suicide Death by Sotalol Overdose
Autumn Massiello, PhD*; Jeffrey Walterscheid, PhD

9:30 a.m. - 9:45 a.m. H122 A Fatal Case of Reye's Syndrome Associated With Pepto-Bismol®
Sasha Osbourne, MD*; Stephen K. Wilson, MD

9:45 a.m. - 10:00 a.m. H123 Comparison of the Concentrations of Morphine, Methadone, and Diazepam When Sampled From Cardiac, Subclavian, Femoral, and Popliteal Sites and From Clamped and Unclamped Subclavian and Femoral Vein Samples
Eric Lemaire, MD*; Carl J. Schmidt, MD

10:00 a.m. - 10:15 a.m. K67 Manners of Death in Drug-Related Fatalities in Florida
Dayong Lee, PhD*; Chris Delcher, PhD; Mildred M. Maldonado-Molina, PhD; Jon R. Thogmartin, MD; Bruce A. Goldberger, PhD

10:15 a.m. - 10:30 a.m. Break
Supported by: Immunalysis Corporation
Postmortem Toxicology

Moderator: Ruth E. Winecker, PhD
OCME
Raleigh, NC

Co-Moderator: Philip M. Kemp, PhD
Bioaeronautical Research Lab
Oklahoma City, OK

10:30 a.m. - 10:45 a.m. K68 A Survey of Human Performance and Postmortem Cases Involving Ketamine in San Francisco Between 1997 and 2013
Alexander C. San Nicolas, MSFS*; Nikolas P. Lemos, PhD

10:45 a.m. - 11:00 a.m. K69 The Detection and Preservation of Arsenite (AsIII) in Pig (Sus Scrofa) Skeletal Muscle Tissue Decomposition in Incubated Soil
Janet Niessner, MSc*; Karl Harrison, PhD

11:00 a.m. - 11:15 a.m. K70 A Rare Case of Criminal Poisoning by Means of Butane Gas: N-Butane Quantification in Biological Fluids and Tissues
Jean Higué, MD*; Florence Toggiardo, MD; Nathalie Grosleron-Gros, MD; Véronique Dumestre-Toulet, PharmD; Jean-Michel Gaulier, PharmD, PhD; Sophie Gromb, JD, PhD

11:15 a.m. - 11:30 a.m. K71 Asphyxia Due to Inhalation of Hydrogen Gas
Dana Mike, BS; Anna Kelly, PhD*

11:30 a.m. - 11:45 a.m. K72 Characterizations of AB-PINACA, AB-FUBINACA, and Metabolites Identified in Driving Under the Influence (DUI) and Postmortem Cases by Liquid Chromatography/Time-of-Flight Mass Spectrometry (LC/TOF/MS) and Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)
Michael Chen, PhD*; Jeffrey Walterscheid, PhD

11:45 a.m. - 12:00 p.m. K73 Determination of Presence and Quantification of Ketamine, Norketamine, and Dehydrokenteramine in Dosed and Buried Rat Remains at Different Stages of Decomposition
Cassandra L. Prickett, BS*; Kimberlee S. Moran, MSc; Laura M. Labay, PhD; Karen S. Scott, PhD

12:00 p.m. - 1:00 p.m. Lunch

Methodology

Moderator: Marc A. LeBeau, PhD
FBI Laboratory
Quantico, VA

Co-Moderator: Robert D. Johnson, PhD
Tarrant County MEO
Fort Worth, TX

1:00 p.m. - 1:15 p.m. K74 Analytical Method Development and Robustness Evaluation for Gas Chromatographic Analysis of Piperazine Designer Drugs
Kathleen K. Luo, BS*; Frank Dorman, PhD

*Presenting Author
1:15 p.m. - 1:30 p.m.  **K75**  Comparison of Solid Phase Extraction (SPE) and Supported Liquid Extraction (SLE) Columns for the Extraction of 23 Novel Psychoactive Substances From Blood and Urine  
Lorna A. Nisbet, MSc*; Karen S. Scott, PhD

1:30 p.m. - 1:45 p.m.  **K76**  Application of Time-of-Flight/Mass Spectrometry (TOF/MS) With Three Different Fragmentation Modes to the Toxicological Screening of Urine Samples Collected From an Electronic Dance Music (EDM) Population  
Helen Piper, BS*; Alexander L. Maggitti III, BS; Jared Castellani, BS; Francis X. Diamond, BS; Matthew M. McMullin, MS; Barry K. Logan, PhD

1:45 p.m. - 2:00 p.m.  **K77**  Optimization of Extraction Parameters Using IMCSzyme™ β-Glucuronidase for Opiate Analysis of Various Toxicological Matrices  
Nancy A. Kedzierski, MS*; Danielle C. Mata, MS

2:00 p.m. - 2:30 p.m.  **Break**  
Supported by: Aegis Sciences Corporation

**Postmortem Pediatric Toxicology**

**Moderator:** Robert A. Middleberg, PhD  
NMS Labs  
Willow Grove, PA

**Co-Moderator:** Nikolas P. Lemos, PhD  
OCME, Forensic Lab Division  
San Francisco, CA

2:30 p.m. - 4:00 p.m.  **K78**  Postmortem Pediatric Toxicology  
Robert A. Middleberg, PhD; Nikolas P. Lemos, PhD; Erik D. Christensen, MD*; James R. Gill, MD*; Ellen Moffatt, MD*; Marina Stajic, PhD*
Thursday

Moderator: James E. Starrs, LLM
Springfield, VA

Co-Moderator: Kenneth E. Melson, JD
Montclair, VA

8:00 p.m. - 8:20 p.m. LW1 Asperger’s Disorder: Does It Make Someone Violent?
Katherine Ramsland, PhD*

8:20 p.m. - 8:40 p.m. LW2 The Gunshot Residue Evidence of The People of the State of California vs.
Robert Blake, the Actor
Bryan R. Burnett, MS*

8:40 p.m. - 9:00 p.m. LW3 The Exhumation and Identification of the Remains of St. Marianne Cope of Molokai
Vincent J. Sava, MA*

9:00 p.m. - 9:20 p.m. LW4 Romance and Reality: Horses and Experimentation
Jennie Meade, JD, MLS*

9:20 p.m. - 9:40 p.m. LW5 Once Upon... Forensic Sciences
Matteo Borrini, PhD*; Camilla Borrini, MSc

9:40 p.m. - 10:00 p.m. LW6 Death in Police Custody: Negligence or Body Packing and Self Administration?
David M. Benjamin, PhD*

10:00 p.m. - 10:20 p.m. LW7 The Investigation Into the Identification and Death of Ukrainian Journalist Georgiy Gongadze: An International Case of Revolution, High Politics, and Toxic Consequences
William C. Rodriguez III, PhD*

10:20 p.m. - 10:30 p.m. Discussion

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Wednesday Evening: 8-10 p.m.

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- To present at BYOS.ppt presentations must be in PowerPoint format. 35mm slides are not accepted.
- Proposals much submitted on this form accompanied by a “6-slides per page” printout of the presentation and an electronic copy on CD or “flash” drive.
- BYOS is not intended as a forum to present scientific papers. It is designed as a means to present interesting information and/or unusual case(s) that may be educational and blended with humor.
- Speakers should plan on ten minutes in which to present their material.
- Material being presented in other parts of the AAFS scientific program will not be accepted at BYOS.ppt.
- Tables, charts, and graphs should be avoided, making every effort to use slides of scenes, bodily findings, and evidence.

This complete form, a “6-slide per page” printout, and the electronic presentation copy should be delivered to the on-site AAFS Staff Office by 4:00 p.m. on Wednesday, February 18, 2015. Presentations will be selected and scheduled based on perceived interest to the audience and in the order in which the completed submissions are received. This form and required printout are needed to organize the BYOS.ppt program and to allow appropriate allocation of continuing education credit. A BYOS.ppt Program Form also will be placed in each registrant’s meeting packet.

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Name (include academic degree/s) ____________________________________________________________

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The presentation is being offered primarily to:
  □ Solicit input/advice on a challenging case
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Presentation is:
  □ A single case
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Briefly describe the material to be present ____________________________________________________

What are the major points to be emphasized? __________________________________________________

How will the attendees benefit from this presentation? __________________________________________

Is there financial interest in the material being discussed?  □ No  □ Yes (If yes, please describe)

How much presentation time is required? ________ minutes  How many PowerPoint slides will be shown?

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Accurate® Reloading Powders, BULLETPROOF®, Glock®, Inc, Magtech Ammunition, Microsoft Corporation, Norsys Software Corp., R. Tools Technology, Inc, Ultra Electronics Forensic Technology, (Discussion of Commercial Products or Services) - B61
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