

# MONDAY WORKSHOPS

*Pre-Registration Required—\$225*

## **W1 Investigating Publishing: How to Disseminate Your Work**

Monday, February 13, 2023

8:30 AM - 4:00 PM

**CE Hours: 5.5**

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**Learning Overview:** After attending this workshop, attendees will be able to review and prepare their own work for a scientific publication; determine the best publication venue for specific educational work; develop case work experiences for publication; and create self-promotion through various means on social media.

**Impact Statement:** This workshop will impact the forensic science community by increasing awareness of the importance of dissemination through educational publications. People within the forensic science community will be able to learn how to best share their work through textbooks, journals, open resources, and social media.

**Program Description:** It is important for practitioners and educators to share the work done both in the field and in the classroom. Knowing the best ways to publish various types of research and practice can be a challenging task. This workshop will share best practices in scientific publishing. This will include an introduction to scientific publishing, building a strong foundation for your publication, identifying where to publish, working with the peer-review process, transitioning casework into publications, and promoting your work via social media. There will also be a hands-on session to allow participants to bring questions and examples of work for publication.

*Chair:*

**Lerah Sutton, PhD**  
University of Florida  
Gainesville, FL

*Co-Chair:*

**Gina Londino-Smolar, MS**  
IUPUI  
Indianapolis, IN

*Presenters:*

**Adrienne Brundage, PhD**  
Texas A&M University  
College Station, TX

**Jason Byrd, PhD**  
University of Florida  
Gainesville, FL

**Kelly Elkins, PhD**  
Towson University  
Towson, MD

**Sharon Plotkin, EdD**  
Miami Dade College  
Miami, FL

**Targeted Audience:** Anthropology, Criminalistics, Digital & Multimedia Sciences, Engineering & Applied Sciences, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science, Questioned Documents, Toxicology

**Knowledge Level Required:** Basic

**Program:**

8:30 AM – 8:45 AM	<b>Opening Remarks</b> <i>Gina Londino-Smolar, MS</i>
8:45 AM – 9:30 AM	<b>Introduction to Scientific Publishing</b> <i>Lerah Sutton, PhD</i>
9:30 AM – 10:15 AM	<b>Building a Strong Foundation for Your Publication</b> <i>Adrienne Brundage, PhD</i>
10:15 AM – 10:30 AM	<b>BREAK</b>
10:30 AM – 11:15 AM	<b>Identifying Where to Publish Your Work</b> <i>Kelly Elkins, PhD</i>
11:15 AM – 12:00 PM	<b>Working Within the Peer Review Process</b> <i>Jason Byrd, PhD</i>
12:00 PM – 1:15 PM	<b>BREAK</b>
1:15 PM – 2:00 PM	<b>Transitioning Casework in Professional Publications and Portfolios</b> <i>Sharon Plotkin, EdD</i>
2:00 PM – 2:45 PM	<b>BREAKOUT SESSION</b>
2:45 PM – 3:00 PM	<b>BREAK</b>
3:00 PM – 3:45 PM	<b>Promoting Your Publication in Social Media</b> <i>Gina Londino-Smolar, MS</i>
3:45 PM - 4:00 PM	<b>Closing Remarks</b> <i>Jason Byrd, PhD</i>

***Pre-Registration Required—\$225***

**W2 Implementing Magnetic Flux Measurements for Forensic Document Examinations**

Monday, February 13, 2023

8:30 AM – 4:15 PM

**CE Hours: 5.75**

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**Learning Overview:** After attending this workshop, attendees will be able to recall and discuss the scientific theory that underlies the instrumentation involved with magnetic flux measurements. They will be able to explain what magnetic properties toner has and how they can be measured. Attendees will be able to prepare a laboratory setup with a Magneto-Optical Imaging Device (MOID) and identify critical variables in the laboratory design, which could impact instrument function. They will be able to follow the methodology provided and operate the instrument to collect magnetic flux measurements from different toner samples. Attendees will be able to evaluate the results they obtain to determine if there has been any type of error or if there is bias. Attendees will be able to interpret the significance of the results.

**Impact Statement:** This workshop will impact the forensic science community by providing Questioned Document examiners with the knowledge, skills, and abilities necessary to deploy a new methodology for examination of toner-printed documents in their laboratories. This methodology has been found to meet the needs of the community as stated, being rapid, non-destructive, and cost-effective.

**Program Description:** In this workshop, attendees will learn about the foundational theory behind MOIDs and magnetic flux measurements of toners, as well as the variables that must be considered when developing a method for forensic laboratory use and will then get hands-on experience with instrumentation. During the hands-on portion of the workshop, attendees will learn how to set up the workspace and instrument, how to operate the software associated with the MOID, and how to conduct magnetic flux measurements of different toner samples (including text samples, point samples, and text insertion samples). The attendees will then be able to independently conduct measurements on provided samples to demonstrate their proficiency with the instrumentation and methodology they have learned. Finally, as a group, attendees and instructors will evaluate the results of the independent measurements. At this stage, attendees will learn how to evaluate and interpret the significance of the results they obtain from the instrument and how to assess if the data has been affected by any of the variables discussed during the theoretical session.

*Chair:*

**Carrie Polston, PhD**

Universite de Lausanne  
Lausanne, SWITZERLAND

*Co-Chair:*

**Zain Bhaloo, MSc**

Canada Border Services Agency (CBSA)  
Ottawa, ON, CANADA

**Targeted Audience:** Questioned Documents

**Knowledge Level Required:** Basic

**Program:**

8:30 AM – 10:00 AM

**Section 1: Theory**

*Carrie Polston, PhD; Zain Bhaloo, MSc*

10:00 AM – 10:30 AM

**BREAK**

10:30 AM – 12:00 PM

**Section 2: Implementation**

*Carrie Polston, PhD; Zain Bhaloo, MSc*

12:00 PM – 2:00 PM

**BREAK**

2:00 PM – 3:00 PM

**Section 3: Evaluation**

*Carrie Polston, PhD; Zain Bhaloo, MSc*

3:00 PM – 3:30 PM

**BREAK**

3:30 PM – 4:15 PM

**Section 4: Questions & Discussion**

*Carrie Polston, PhD; Zain Bhaloo, MSc*

***Pre-Registration Required—\$225***

**W3 Forensic Postmortem Radiology: Crossing the Border Between Radiology and Pathology**

Monday, February 13, 2023

8:30 AM - 5:00 PM

**CE Hours: 6.25**

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**Learning Overview:** After attending this workshop, attendees will: (1) have learned the basics in how to get started in the field of forensic radiology, (2) understand the current state-of-the-art and levels of evidence in forensic radiology, (3) will have learned about applications to assist forensic pathologists and practitioners in medical death investigation, and (4) have been made aware of potential resources available to interested practitioners.

**Impact Statement:** This presentation will impact the forensic science community by providing attendees with expertise from around the world on the use of, best practices for, and the evidence base of forensic postmortem radiology.

**Program Description:** This workshop will provide an overview of the current state of forensic imaging in the world, the logistics of how to start a forensic imaging program, and how future technologies may impact the field of forensics.

*Chair:*

**Summer Decker, PhD**

University of South Florida  
Tampa, FL

*Co-Chair:*

**Edward Mazuchowski, MD**

Forensic Pathology Associates  
Allentown, PA

*Presenters:*

**Michael J. Thali, MD**

University of Zurich  
Zurich, SWITZERLAND

**Natalie Adolphi, PhD**

University of New Mexico School of Medicine  
Albuquerque, NM

**Fabrice Dedouit, MD**

University Hospital of Toulouse  
Toulouse, FRANCE

**Lars Ebert, PhD**

University of Zurich  
Zurich, SWITZERLAND

**Jonathan M. Ford, PhD**

University of South Florida  
Tampa, FL

**Hideki Hyodoh, MD**

University of Fukui School of Medicine  
Fukui, JAPAN

**Chris O'Donnell, MBBS**

Victoria Institute of Forensic Medicine  
Victoria, BC, CANADA

**Rick R. Van Rijn, MD, PhD**

Netherlands Forensic Institute  
Amsterdam, NETHERLANDS

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

**Knowledge Level Required:** Basic

**Program:**

- 8:30 AM – 9:00 AM                    **Introductions, Background, and Historical Overview**  
*Michael Thali, MD*
- 9:00 AM – 9:30 AM                    **Integrating Forensic Imaging Into the Medicolegal Investigation: Practical Steps**  
*Edward L Mazuchowski, MD, PhD*
- 9:30 AM – 10:00 AM                    **Development of a Forensic CT Service in a Medical Examiner Office**  
*Natalie L. Adolphi, PhD*
- 10:00 AM – 10:30 AM                    **PMCT Status in Australia: An International Perspective**  
*Chris O'Donnell, MBBS*
- 10:30 AM – 10:45 AM                    **BREAK**
- 10:45 AM – 11:30 AM                    **Directed PMCT Angiography and Evaluation of Resuscitative Medical Therapy**  
*Edward L Mazuchowski, MD, PhD*
- 11:30 AM – 12:00 PM                    **Forensic Postmortem CT in Children: Application and Limitations**  
*Rick R. van Rijn, MD, PhD*
- 12:00 PM – 12:30 PM                    **Interactive Cases I**  
*Rick van Rijn, MD, PhD*
- 12:30 PM – 1:30 PM                    **BREAK**
- 1:30 PM – 2:00 PM                    **PMCT in Disaster Victim Identification**  
*Summer Decker, PhD*
- 2:00 PM – 2:30 PM                    **Postmortem Cardiac Imaging**  
*Fabrice Dedouit, MD, PhD*
- 2:30 PM – 3:05 PM                    **3D Visualization in Forensic Postmortem Radiology: Possibilities and Examples**  
*Summer Decker, PhD*
- 3:05 PM – 3:20 PM                    **BREAK**
- 3:20 PM – 3:50 PM                    **The Use of MRI in Forensic Postmortem Imaging**  
*Hideki Hyodoh MD, PhD*
- 3:50 PM – 4:30 PM                    **Emerging Technologies in Forensic Imaging**  
*Jonathan Ford, PhD; Lars Ebert, PD, PhD*
- 4:30 PM - 5:00 PM                    **Interactive Cases II**  
*Summer Decker, PhD; Lars Ebert, PD, PhD; Jonathan Ford, MD*

***Pre-Registration Required—\$225***

**W4 Just Communications: Providing Clear and Accurate Reports and Testimony on Forensic DNA Results**

Monday, February 13, 2023

8:30 AM - 5:00 PM

**CE Hours:** TBD

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**Learning Overview:** DNA experts are asked in court to translate hours of chemistry and complex statistical analysis into yes or no answers. We learn to do this from previous experts who teach us the terms of art, metaphorical examples, and boundaries of permissible expert opinion. Like all human communication, this is an evolving art that adjusts to changes in science, computation, law, and culture. After attending this presentation, DNA analysts, lawyers, judges, criminal justice stakeholders, and other attendees will be better able to evaluate and communicate laboratory procedures and findings. They will be encouraged to adopt agile practices for clear and accurate testimony on the witness stand and will be familiar with tips and tricks for guarding against common pitfalls. Participants will also learn from examples that have led to wrongful convictions, including bias in DNA mixture interpretation.

**Impact Statement:** This presentation impacts the forensic science community by discussing the critical consequences that can result from false or misleading testimony that is anecdotal rather than based on empirical data and ways in which labs and individual analysts may mitigate some of these consequences through technical training, testimony oversight, and quality management.

**Program Description:** It is essential that forensic scientists are able to clearly and accurately communicate their work, whether it is casework results or new research. This includes talking to other scientists, investigators, attorneys, judges, or jury members, all of which present their own challenges. The presenters will discuss language choice and the impact of certain words and phrases in forensic DNA reports and testimony and methods for resisting pressures from criminal justice stakeholders to stretch testimony beyond the limits of what science can support. Presenters will discuss best practice for communicating scientific results in reports and courtroom testimony to ensure results are being understood and not misunderstood. Topics that will be covered in the presentation are DNA transfer, persistence, prevalence, and recovery; the hierarchy of propositions; evaluating findings given activity-level propositions; and human factors and cognitive bias.

*Chair:*

**Tiffany A. Roy, JD, MS**  
ForensicAid  
West Palm Beach, FL

*Co-Chair:*

**Cynthia Cale, MS**  
CMC Forensic DNA Consulting, LLC  
New Caney, TX

*Presenters:*

**Greg Hampikian, PhD**  
Boise State University  
Boise, ID

**Julie Burrill, PhD**  
University of Dundee  
Stony Brook, NY

**Targeted Audience:** Criminalistics, Jurisprudence, Pathology/Biology

**Knowledge Level Required:** Basic

**Program:**

8:00 AM – 10:00 AM **How to Practically Establish Multidisciplinary Audience-Based Communication**  
*Julie Burrill, PhD*

10:00 AM – 12:00 PM **Human Factors in Forensic Testing and Reporting**

*Tiffany Roy, JD, MS*

12:00 PM – 1:00 PM **BREAK**

1:00 PM – 3:00 PM **Case Assessment & Interpretation: Review & Application of DNA-TPPR Research**

*Cynthia Cale, MS*

3:00 PM – 5:00 PM **Case Examples From the Idaho Innocence Project and the Forensic Justice Project**

*Greg Hampikian, PhD*



***Pre-Registration Required—\$225***

**W5 Diversity, Equity, and Inclusion in the World of Forensic Practice: Lessons and Actions**

Monday, February 13, 2023

8:30 AM - 5:00 PM

**CE Hours: 6.5**

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**Learning Overview:** Upon completing this workshop, attendees should be able to acknowledge the need to address historic and ongoing issues of diversity, equity, and inclusion as they impact the forensics community at all levels. With this understanding of the need for action, participants will be armed with a potential path to light the spark of productive change within their own organization in order to move toward parity for all.

**Impact Statement:** This workshop will impact the forensic science community by addressing many issues encountered that are impacted by failure to recognize diversity, equity, and inclusion, thus allowing attendees to see the scope of the problem from a historical and present-day view. This recognition of the breadth and depth of the problem—along with a primer on working within organizations to make changes for the better—will lead the community toward unity and fairness.

**Program Description:** This workshop will focus on social justice in the forms of Diversity, Equity, and Inclusion (DEI). *E pluribus unum*. From many one. From its founding, the United States has been seen as a celebration of strength through diversity, although that lesson that can be too easily forgotten, lost, or worse. DEI can be viewed as a means to that lofty ideal—that all people are created equal. Efforts toward social justice attempt to level the playing field for all members of society at local, regional, national, and international levels. Targeted sessions on general forensic practice, medicolegal forensics, representing the hated, and humanitarian efforts will illustrate the need for DEI to strive for parity. The story of the tragic “Pulse shooting” illustrates the depths of depravity, but also tells of the success that can be achieved by embracing unity through diversity. Finally, a primer to ignite organizational efforts will provide a roadmap to a path forward for all.

*Chair:*

**J.C.U. Downs, MD**

forensX, LLC  
Savannah, GA

*Co-Chair:*

**Gina Londino-Smolar, MS**

IUPUI  
Indianapolis, IN

*Presenters:*

**Claude Roux, PhD**

University of Technology Sydney  
Sydney, AUSTRALIA

**Ann Geisendorfer, JD**

SUNY Delhi  
Delhi, NY

**Jan Gorniak, DO**

Clark County Coroner/Medical Examiner  
Las Vegas, NV

**Ashley Pennington, JD**

Charleston County Public Defenders Office  
Charleston, SC

**Duarte Vieira, MD**

University of Coimbra  
Coimbra, PORTUGAL

**Robin Maynard, AS**

Libby’s Legacy Breast Cancer Foundation  
Orlando, FL

**James McKim, PMP**

Organizational Ignition, LLC  
Goffstown, NH

**Targeted Audience:** All Sections

**Knowledge Level Required:** Basic

**Program:**

8:30 AM – 8:35 AM

**Introduction**

*J.C.U. Downs, MD*

8:35 AM – 9:15 AM

**DEI in Everyday Forensic Practice**

*Claude Roux, PhD*

9:15 AM – 10:00 AM

**Bias in the Classroom**

*Ann Geisendorder, JD*

10:00 AM – 10:15 AM

**BREAK**

10:15 AM – 11:00 AM

**Bias in Medicine**

*Jan Gorniak, DO*

11:00 AM – 11:45 AM

**Representing Those We Dislike**

*Ashley Pennington, JD*

11:45 AM – 12:00 PM

**Questions and Answers**

12:00 PM – 1:30 PM

**BREAK**

1:30 PM – 2:15 PM

**DEI in Humanitarian Forensic Action**

*Duarte Vieira, MD*

2:15 PM – 3:00 PM

**The Pulse Shooting–The Phoenix Rises**

*Robin Maynard, AS*

3:00 PM – 3:15 PM

**BREAK**

3:15 PM – 4:45 PM

**The Diversity Factor: Igniting Superior Organizational Performance**

*James McKim, PMP*

4:45 PM – 5:00 PM

**Questions and Answers**

***Pre-Registration Required—\$225***

**W6 How Science Works to Identify Unknown Decedents Decades After Death**

Monday, February 13, 2023

8:30 AM - 5:15 PM

**CE Hours: 7.0**

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**Learning Overview:** After attending this workshop, attendees will better understand how science works in a multidisciplinary approach to identify unknown decedents decades after death via multiple lines of evidence and objective data.

**Impact Statement:** The presentations in this workshop will impact the forensic science community by illustrating a trustworthy process that uses anthropology alongside historical research, archaeology, material evidence analysis, odontology, and biological/chemical analyses—underpinned by a comprehensive quality assurance program and case management system—to make identifications.

**Program Description:** This workshop will highlight the case resolution process at the Defense POW/MIA Accounting Agency where identifying decedents decades after death is the norm. The presenters will demonstrate the need for objective data from the disciplines of Forensic Archaeology, Forensic Anthropology, Forensic Odontology, Material Evidence Analysis, Chest Radiograph Comparison, Isotope Analysis, and DNA Analysis to support forensic identification using case examples. Participants will learn how a robust surety, or quality assurance, program ensures all scientific work is trustworthy and above reproach in an ASI National Accreditation Board (ANAB) -accredited laboratory. A special emphasis will be included at the end of the workshop to bring all the methods/evidence together to make a complete case for an identification. This integrated portion of the workshop is designed to help the practitioner understand why a multidisciplinary approach is necessary for cold case resolution.

*Chair:*

**Rebecca J. Wilson-Taylor, PhD**

Defense POW/MIA Accounting Agency  
Kapolei, HI

*Co-Chair:*

**Gregory E. Berg, PhD**

Defense POW/MIA Accounting Agency  
Kaneohe, HI

*Presenters:*

**Kristin Bukovec, BS**

Defense POW/MIA Accounting Agency  
Mililani, HI

**Lesley A. Chesson, MS**

Defense POW/MIA Accounting Agency  
Joint Base Pearl Harbor-Hickam, HI

**J.S. DeMeo, DMD**

Defense POW/MIA Accounting Agency  
Honolulu, HI

**Susan Jaques, MA**

Defense POW/MIA Accounting Agency  
Joint Base Pearl Harbor-Hickam, HI

**Timothy P. McMahon, PhD**

Defense Health Agency  
Camden, DE

**Owen O’Leary, PhD**

Defense POW/MIA Accounting Agency  
Joint Base Pearl Harbor-Hickam, HI

**Denise To, PhD**

Defense POW/MIA Accounting Agency  
Kailua, HI

**Elizabeth Andreas-Feeney, BS**

Defense POW/MIA Accounting Agency  
Joint Base Pearl Harbor-Hickam, HI

**John E. Byrd, PhD**

Defense POW/MIA Accounting Agency  
Mililani, HI

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

**Knowledge Level Required:** Basic

**Program:**

8:30 AM – 8:45 AM	<b>Welcome &amp; Overview</b> <i>John Byrd, PhD</i>
8:45 AM – 9:30 AM	<b>Science Begins in the Field with Forensic Archaeology</b> <i>Denise To, PhD</i>
9:30 AM – 10:15 AM	<b>Forensic Anthropology at the DPAA</b> <i>Rebecca Wilson-Taylor, PhD</i>
10:15 AM – 10:30 AM	<b>BREAK</b>
10:30 AM – 11:15 AM	<b>Dental Identifications in Military Cases at the DPAA</b> <i>J S DeMeo, DMD</i>
11:15 AM – 12:00 PM	<b>Contextual, Circumstantial, and Individualizing Data of Material Evidence</b> <i>Owen O’Leary, PhD</i>
12:00 PM – 1:00 PM	<b>BREAK</b>
1:00 PM – 1:45 PM	<b>Chest Radiograph Comparison in Identifications of U.S. Military Personnel</b> <i>Susan Jaques, MA</i>
1:45 PM – 2:15 PM	<b>The Power of DNA for Cold Case Resolution: Time Depth, Relationships, and Technology</b> <i>Timothy McMahon, PhD</i>
2:15 PM – 2:30 PM	<b>BREAK</b>
2:30 PM – 3:15 PM	<b>Isotope Testing in the Forensic Identification Process</b> <i>Lesley Chesson, MS</i>
3:15 PM – 4:00 PM	<b>The Need for Robust Quality Assurance and Data Management Programs and Benefits of ANAB Accreditation</b> <i>Elizabeth Andreas-Feeney, BS; Kristin Bukovec, BS</i>
4:00 PM – 4:15 PM	<b>BREAK</b>
4:15 PM – 5:00 PM	<b>All the Puzzle Pieces Fit: Personal Identification at the DPAA</b> <i>Gregory Berg, PhD</i>
5:00 PM – 5:15 PM	<b>Questions and Answers</b>
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***Pre-Registration Required—\$125***

**W7 The Seven Habits for Highly Effective Standards Development**

Monday, February 13, 2023

8:30 AM - 12:00 PM

**CE Hours: 3.25**

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**Learning Overview:** After attending this presentation, attendees will (1) gain a better understanding of the role and importance of consensus-based standards in strengthening forensic science in the United States and internationally; (2) gain a greater awareness of their own individual role in the development of consensus-based standards, and (3) learn how to provide input and get involved.

**Impact Statement:** The 2009 National Academy of Sciences (NAS) Report emphasized the need for standards in forensic science. Since this Report was issued, more than 140 forensic science standards have been published, and more than 100 of those have been placed on the Organization of Scientific Area Committees (OSAC) Registry. Still, many more discipline-specific standards are needed to continue to strengthen the field. Standards development is a long and sometimes contentious process. To be successful, those involved must be able to lead themselves and influence, engage, and collaborate with others. This workshop will provide attendees with information on how they can become more effective in the standards development process.

**Program Description:** Attendees will hear updates about forensic science standards development efforts in the United States and internationally. They will also gain a better understanding of ways to become more effective in participating in the development of consensus-based standards, including how to write documents, submit public and committee comments, and adjudicate those comments. Attendees will also learn the various ways they can get involved in forensic science standards development.

*Chair:*

**Agnes Winokur, MS**

Drug Enforcement Agency  
Miami, FL

*Co-Chair:*

**Marc A. LeBeau, PhD**

Federal Bureau of Investigation  
Quantico, VA

*Presenters:*

**Teresa L. Ambrosius, BA**

AAFS Standards Board  
Colorado Springs, CO

**Karen Reczek, MLS**

NIST  
Rockville, MD

**Allison Getz, MS**

NIST  
Monrovia, MD

**Kevin P. Kulbacki, MSFS**

KDX Forensic Consulting, LLC  
Chicago, IL

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

**Knowledge Level Required:** Basic

**Program:**

8:30 AM – 8:45 AM	<b>Introduction and What's New Since AAFS 2022</b> <i>Teresa Ambrosius, BA</i>
8:45 AM - 9:15 AM	<b>How to Write a Good Standard</b> <i>Karen Reczek, MLS</i>
9:15 AM - 9:45 AM	<b>What is Consensus and How Do We Get There?</b> <i>Agnes Winokur, MS</i>
9:45 AM - 10:00 AM	<b>BREAK</b>
10:00 AM - 10:30 AM	<b>The Best Way to Write and Submit Comments</b> <i>Marc LeBeau, PhD</i>
10:30 AM - 11:00 AM	<b>How Are Comments Adjudicated?</b> <i>Kevin P. Kulbacki, MSFS</i>
11:00 AM - 11:15 AM	<b>How Can YOU Get Involved in the Standards</b> <i>Allison Getz, MS</i>
11:15 AM - 12:00 PM	<b>Questions and Answers</b>

***Pre-Registration Required—\$150***

**W8 Postmortem Interval Estimation Using a Novel Data Set and Methods**

Monday, February 13, 2023

8:30 AM - 12:00 PM

**CE Hours: 3.25**

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**Learning Overview:** Attendees of this workshop will learn how to use geoFOR application to record decomposition characteristics and estimate the Postmortem Interval (PMI) using the available machine-learning models.

**Impact Statement:** This workshop will impact the forensic science community's practice by demonstrating a procedure for recording scene and decomposition information and machine learning models to estimate PMI.

**Program Description:** This workshop will introduce a data repository and associated machine learning models to provide a novel method of estimating the PMI in the geoFOR application. The lack of a large reference dataset for developing reliable and accurate models has been a major barrier for improving methods for determining the time since death.

Since 2019, data from forensic cases and observations from anthropological research facilities have been collected in a reference dataset that contains over 1,500 cases from locations across the United States. This reference dataset is representative of forensic casework; it is geographically diverse and encompasses the various scenarios in which human remains are discovered in forensic casework. Along with decomposition characteristics, the application records location, which allows environmental data from existing databases from the National Oceanic and Atmospheric Administration (NOAA), such as temperature, humidity, and precipitation, to be tied to the location of death to model variables important in the decomposition process. The availability of this reference dataset allows for machine learning models to be employed to provide a robust estimate of PMI with an associated prediction interval.

This workshop will first demonstrate the application, reference data set, and the data entry process. Secondly, Geographic Information Systems (GIS) methods and spatial coding will be introduced to demonstrate how environmental datasets are automatically populated and used in the statistical models and how ArcGIS® is used to store and manage data for collaborators. Third, machine learning models that are used in the predictions of PMI from both observed decomposition variables and integrated environmental variables will be explained. Next, Bayesian generative models will be discussed. These methods are useful for improving research design for future studies of decomposition. For example, using expert knowledge and a priori knowledge, this information can be integrated to provide data-informed stages of decomposition or how decomposition variables are associated with body size or age. Finally, this workshop will provide an overview of how this project aims to follow an Open Science model from the National Institutes of Health with the goal of sharing scientific data to accelerate research discovery, enhance research rigor and reproducibility, provide accessibility to high-value datasets, and promote data reuse for future research studies. Participants will gain experience using the geoFOR application to input data, manage their data in ArcGIS®, and make predictions of PMI.

*Chair:*

**Katherine E. Weisensee, PhD**  
Clemson University  
Clemson, SC

*Co-Chair:*

**Cristina I. Tica, PhD**  
Clemson University  
Clemson, SC

*Presenters:*

**D. Hudson Smith, PhD**  
Clemson University  
Clemson, SC

**Carl Ehrett, PhD**  
Clemson University  
Clemson, SC

**Patricia Carbajales-Dale, MS**

Clemson University  
Clemson, SC

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

**Knowledge Level Required:** Basic

**Program:**

8:30 AM – 8:45 AM	<b>Introduction and Background</b> <i>Katherine E. Weisensee, PhD</i>
8:45 AM – 9:15 AM	<b>Survey Instrument and Data Manual</b> <i>Cristina I. Tica, PhD</i>
9:15 AM – 10:00 AM	<b>ArcGIS and Spatially Coded Environmental Data for Informing Models of Decomposition</b> <i>Patricia Carbajales-Dale, MS</i>
10:00 AM – 10:15 AM	<b>BREAK</b>
10:15 AM – 11:00 AM	<b>Machine-learning Models for Predicting PMI</b> <i>Carl Ehrett, PhD</i>
11:00 AM – 11:45 AM	<b>Bayesian Methods for Generating Understanding of Decomposition Process</b> <i>D. Hudson Smith, PhD</i>
11:45 AM – 12:00 PM	<b>Open Science, Wrap-up, and Discussion of Next Steps</b> <i>Katherine E. Weisensee, PhD</i>



***Pre-Registration Required—\$225***

**W9 Inside the Black Box: Forensic Psychiatry for Lawyers**

Monday, February 13, 2023

9:00 AM - 5:00 PM

**CE Hours: 6.5**

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**Learning Overview:** After attending this workshop, attendees will: (1) have an expanded understanding of mental illness; (2) learn how to effectively utilize an expert psychiatric witness in criminal and civil cases; (3) understand the difference between appropriate and inappropriate consult questions for the expert; (4) learn about unethical expert witnesses (how to spot them, why to avoid them, and effectively crossing them); and (5) understand the ethical obligations of an expert witness and anticipate when these can conflict with an attorney’s ethical duties.

**Impact Statement:** This workshop will have a positive impact on the forensic science community in terms of helping attorneys work more effectively and ethically with experts in the mental health field. The skill and knowledge acquired will also help inform members of the forensic mental health field to avoid some of the pitfalls that can occur in the midst of complex legal cases. Some of the ethical issues examined will be generalizable to other expert witnesses.

**Program Description:** This workshop will cover the history of forensic psychiatry, the use and types of experts, and the clinical and ethical guidelines followed. Discussion will include the crucial differences between a treating clinician and an expert, the use and misuse of psychological testing, and the application of case law and statutes to appropriately answer psychiatric-legal questions. This workshop will be interactive, with case debates prepared by the presenters and invited submissions from attendants. This workshop is designed to help inform attorneys how to work more effectively with mental health experts, as well as confidently navigate the ethical waters when doing so.

*Chair:*

**Corina Freitas, MD**  
Freitas and Associates  
Alexandria, VA

*Co-Chair:*

**Vivian Shnaidman, MD**  
Jersey Forensic Consulting, LLC  
Princeton, NJ

*Presenters:*

**George D. Annas, MD**  
Forensic Psychiatry Consulting, LLC  
Syracuse, NY

**Targeted Audience:** Jurisprudence

**Knowledge Level Required:** Basic

**Program:**

9:00 AM – 10:00 AM

**Introduction of Speakers, Topic, & Basic Psychiatry**  
*Corina Freitas, MD*

10:00 AM – 12:00 PM

**History of Forensic Psychiatry and How to Formulate a Psychiatric-Legal Question**  
*Corina Freitas, MD; Vivian Shnaidman, MD; George D. Annas, MD*

12:00 PM – 1:00 PM

**BREAK**

1:00 PM – 2:00 PM

**Ethics in Forensic Psychiatry**

*Corina Freitas, MD; Vivian Shnaidman, MD; George D. Annas, MD*

2:00 PM – 3:00 PM

**DSM-5, Diagnoses, and Psychological Testing**

*Corina Freitas, MD; Vivian Shnaidman, MD; George D. Annas, MD*

3:00 PM – 3:15 PM

**BREAK**

3:15 PM – 4:30 PM

**Active Case Participation**

*Corina Freitas, MD; Vivian Shnaidman, MD; George D. Annas, MD*

4:30 PM – 5:00 PM

**Questions and Answers**

***Pre-Registration Required—\$125***

**W10 Reefer Madness: The History of Tetrahydrocannabinol (THC) Psychosis and Modern Adverse Events**

Monday, February 13, 2023

1:00 PM - 4:30 PM

**CE Hours: 3.25**

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**Learning Overview:** After attending this workshop, attendees will have a better understanding of the state of cannabis legalization and regulations, the history of cannabis psychosis and adverse events, gaps in the scientific knowledge and promulgated mythology, modern incidents of adverse effects and potential mechanisms, and cases in which evidence and circumstances indicate THC-related psychosis. Content will enable attendees to influence, educate, and collaborate with stakeholders in their communities regarding threats to public health and public safety.

**Impact Statement:** This workshop will impact the forensic science community by increasing attendees' understanding of the complexities of the impacts of cannabis and THC analogs in our communities and the need for a multidisciplinary collaboration to know the incidents of adverse events and importance of appropriately and thoroughly describing the etiology of adverse events.

**Program Description:** In many jurisdictions across the United States, alternative cannabimimetic products have erupted and proliferated. Due to knowledge gaps, confusion, and lack of enforcement, new products that are claimed to be legal and safe derivatives of hemp have been propagated. The pervasiveness of products containing synthetic (i.e., unnatural) THC isomers is well known in communities, as they are commonly sold in vape shops, Cannabidiol (CBD) stores, gas stations, and convenience stores. These synthetic THC isomers and derivatives include, but are not limited to,  $\Delta 8$ -THC,  $\Delta 10$ -THC,  $\Delta 6a$ - $10a$ -THC, THC-acetate (THC-O), CBD-di-acetate (CBD-di-O), Tetrahydrocannabiphorol (THC-P), exo-THC, Hexahydrocannabinol (HHC), Tetrahydrocannabutol (THC-B), and halogenated THC. Unknown internet sources have misinterpreted the scientific literature, perpetuating falsehoods and misinformation, and consumers have a false sense of security in the quality and efficacy of these products. A current and significant challenge facing the United States is that the population of persons taking traditional THC products as well as these THC analogs is exponentially more than those who would consume the "older" synthetic cannabinoids. The incidence of reported adverse effects is on the rise, as demonstrated by the increase in calls to poison control centers. However, attribution of the adverse event to a defined drug rarely happens because the product consumed by the person is not analyzed for chemical content and toxicology testing is often limited. Conversely, symptomology and general health of persons is also rarely recorded in the event that products are tested from the self-reporting individual.

*Chair:*

**Michelle R. Peace, PhD**

Virginia Commonwealth University  
Richmond, VA

*Co-Chair:*

**Nicholas B. Tiscione, MS**

Palm Beach County Sheriff's Office  
West Palm Beach, FL

*Presenters:*

**Alaina Holt, BS**

Virginia Commonwealth University  
North Chesterfield, VA

**Justin L. Poklis, BS**

Virginia Commonwealth University  
North Chesterfield, VA

**Adam White, PhD**

Adam J. White Clinical & Forensic Psychology  
West Palm Beach, FL

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

**Knowledge Level Required:** Basic

**Program:**

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|-------------------|--|
| 1:00 PM – 1:10 PM | <b>Introduction: Cannabis and THC Isomer Products Proliferation</b><br><i>Nicholas B. Tiscione, MS</i>                                   |
| 1:10 PM – 1:30 PM | <b>National Cannabis Legislation and Regulations</b><br><i>Michelle R. Peace, PhD</i>  |
| 1:30 PM – 1:50 PM | <b>THC Mythology and Knowledge Gap Analysis</b><br><i>Michelle R. Peace, PhD</i>   |
| 1:50 PM – 2:00 PM | <b>The Scope of THC Analogue Analytical Challenges</b><br><i>Alaina Holt, BS</i>   |
| 2:00 PM – 2:30 PM | <b>THC Psychosis: Historical Perspective and Modern Incidents</b><br><i>Justin L. Poklis, BS</i>   |
| 2:30 PM – 2:45 PM | <b>BREAK</b>   |
| 2:45 PM – 3:00 PM | <b>THC Adverse Effects Potential Mechanisms: Modern Literature</b><br><i>Michelle R. Peace, PhD</i>                                      |
| 3:00 PM – 3:45 PM | <b>Case Reports From the Practitioner Lab—Typical THC Impairment vs. THC Madness (Forensic Cases)</b><br><i>Nicholas B. Tiscione, MS</i> |
| 3:45 PM – 4:00 PM | <b>Case Report From the Research Lab—Self-Reported, Requested Product Analysis</b><br><i>Alaina Holt, BS</i>                             |
| 4:00 PM – 4:20 PM | <b>Case Report From the Practitioner—Psychiatric Clinical Case</b><br><i>Adam White, PhD</i>   |
| 4:20 PM – 4:30 PM | <b>Questions and Answers</b>   |

**Pre-Registration Required—\$150**

**W11 Acetabular Age Estimation: Theory, Method, and Application**

Monday, February 13, 2023

1:00 PM - 4:30 PM

**CE Hours: 3.25**

**Learning Overview:** Attendees of this workshop will become proficient in applying the most current method for estimating age based on the acetabulum, including: how to interpret descriptions of acetabular traits relevant to age estimation; how to score acetabular traits using the SanMillán-Rissech method; and how to estimate age-at-death intervals using the IDADE2 website.<sup>1,2</sup>

**Impact Statement:** This workshop will impact the forensic science community by demonstrating the relevance of a method that has remained underutilized in forensic anthropological practice.

**Program Description:** The goal of this workshop is to provide a brief overview of the theory and history behind acetabular age estimation, then to bring practitioners up to date with in-depth, hands-on, technical knowledge of the application of the SanMillán-Rissech (2017) acetabular aging method and its accompanying website (IDADE2).

*Chair:*

**Allysha P. Winburn, PhD**  
University of West Florida  
Pensacola, FL

*Co-Chair:*

**Jonathan Bethard, PhD**  
University of South Florida  
Tampa, FL

*Presenters:*

**Marta San-Millán, PhD**  
University Girona  
Girona, SPAIN

**Targeted Audience:** Anthropology

**Knowledge Level Required:** Intermediate

**Program:**

1:00 PM – 1:15 PM	<b>Welcome and Brief Review of the Past 20 Years of Acetabular-Aging Literature</b> <i>Allysha P. Winburn, PhD; Jonathan Bethard, PhD; Marta San-Millán, PhD</i>
1:15 PM – 1:30 PM	<b>Overview of Acetabular Regions and Traits Relevant to Age Estimation</b> <i>Allysha P. Winburn, PhD; Marta San-Millán, PhD</i>
1:30 PM – 2:30 PM	<b>Deep Dive Into the SanMillán-Rissech (2017) Method</b> <i>Allysha P. Winburn, PhD; Marta San-Millán, PhD</i>
2:30 PM – 4:30 PM	<b>Laboratory Time: Hands-on Interaction with Acetabula</b> <i>Allysha P. Winburn, PhD; Jonathan Bethard, PhD; Marta San-Millán, PhD</i>

**References:**

1. *Int J Leg Medicine*, 47, 131: 501–525.
2. <http://bass.uib.es/~jaume/IDADE2/https/index.html>.

***Pre-Registration Required—\$125***

**W12 An Introduction to Automatic and Objective Firearm Evidence Identification and Report of Error Rate**

Monday, February 13, 2023

1:00 PM - 5:00 PM

**CE Hours: 3.75**

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**Learning Overview:** Upon completion of this workshop, participants will understand three Congruent Matching (CM) methods used in the objective comparison of impressed and striated toolmarks imparted on fired cartridge components produced by firearms. Participants will be introduced to aspects of virtual comparison microscopy and automated comparison algorithms and how they lay a basis for the weight of evidence for the toolmark comparison. Participants will discuss and test the methods, algorithms, and procedures to identify strengths, weaknesses, and limitations that will drive future improvements.

**Impact Statement:** The forensic science specialty of firearm and toolmark identification is witnessing a sea change from the use of classical comparison microscopy and subjective opinion to 3D microscopic measurement of toolmarks and objective algorithms for measurement of similarity, ultimately leading to statistical methods determining weight of evidence. This workshop will impact the forensic science community as the introduction of these concepts in a workshop offers direct experience and knowledge that will in turn drive toward evidentiary acceptance in the courtroom

**Program Description:** Firearm evidence identification using microscopic side-by-side image comparison has a history of more than 100 years. However, the scientific foundation of firearm identification has been recently called into question by several government-funded reports. To answer these challenges, the National Institute of Standards and Technology (NIST) researchers developed the CM methods for automatic and objective comparison and correlation of 3D firearm-related toolmarks that provide a statistical foundation for quantitative expressions of the weight of evidence.

*Chair:*

**Robert M. Thompson, MFS**

NIST

Gaithersburg, MD

*Co-Chair:*

**Kelly Sauerwein, PhD**

NIST

Gaithersburg, MD

*Presenters:*

**Junfeng Song, PhD**

NIST

Gaithersburg, MD

**Targeted Audience:** Criminalistics, General, Jurisprudence

**Knowledge Level Required:** Advanced

**Program:**

1:00 PM – 1:45 PM

**Background-Standard, Measurements, Traceability and Quality Assurance**

*Junfeng Song, PhD; Robert M. Thompson, MFS*

1:45 PM – 2:30 PM

**Congruent Matching (CM) Methods, CMC, CMF, and CMPS**

*Junfeng Song, PhD*

2:30 PM – 2:45 PM

**BREAK**

2:45 PM – 3:00 PM

**CME for National Database Searching**

*Junfeng Song, PhD*

3:00 PM – 4:00 PM

**Reporting the Weight of Evidence-Error Rates and Likelihood Ratio**

*Junfeng Song, PhD; Robert M. Thompson, MFS*

4:00 PM – 4:30 PM

**Algorithm Aversion in Case Work—Why it Happens and How to Prevent**

*Junfeng Song, PhD; Robert M. Thompson, MFS*

4:30 PM – 5:00 PM

**Summary and Future Work**

*Junfeng Song, PhD; Robert M. Thompson, MFS*

**Pre-Registration Required—\$125**

**W13 Intraoral Photography for the Forensic Scientist**

Monday, February 13, 2023

1:00 PM - 5:00 PM

CE Hours: 3.75

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**Learning Overview:** The primary audience will be those who need to document injuries to the oral structures in their daily practice. After attending this workshop, attendees from novice to moderately capable will better understand the mechanisms of injury, the physics of photography and lighting, the oral structures of the human, and the techniques for capturing the injury of these structures.

**Impact Statement:** Currently, there are no guidelines for the exposure of photographs to document injuries within the oral cavity. This workshop will impact the forensic science community by providing guidance to those who are tasked with memorializing injuries of forensic importance.

**Program Description:** This half-day presentation will introduce attendees to the issues with the capture of intraoral photographs and methods of overcoming these issues. It will incorporate information regarding mechanisms of injury, body response to those mechanisms, physics of lighting and photographic technique, discussion of surface oral anatomy with examples of normal variations, a discussion of photographic equipment, and specific techniques for improvement of intraoral photography techniques. The presenters will be a forensic nurse, a forensic odontologist and a professional photographer.

*Chair:*

**David A. Williams, DDS**  
Trojan Horse Consulting  
Randallstown, MD

*Co-Chair:*

**Jessica Volz, DNP**  
Adventist Health Care  
Brunswick, MD

*Presenters:*

**Erin E. Williams, BA**  
Erin Williams Photography  
Ridgewood, NY

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

**Knowledge Level Required:** Basic

**Program:**

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|-------------------|--|
| 1:00 PM – 1:15 PM | <b>Administrative/Understanding the Mechanism of Injuries</b><br><i>David A. Williams, DDS</i> |
| 1:15 PM – 1:45 PM | <b>Differentiated Structures of the Human Oral Anatomy</b><br><i>David A. Williams, DDS</i>    |
| 1:45 PM – 2:10 PM | <b>Types of Injury: Acute, Chronic, and Scarring</b><br><i>Jessica Volz, DNP</i>               |



2:10 PM – 2:30 PM

**Describe the Physics of Photography**

*Erin E. Williams, BA*

2:30 PM – 2:45 PM

**BREAK**

*David A. Williams, DDS*

2:45 PM – 3:45 PM

**Equipment Suggestions**

*Erin E. Williams, BA*

3:45 PM – 4:15 PM

**Identify Types of Injury**

*Jessica Volz, DNP*

4:15 PM – 5:00 PM

**Apply Demonstrated Techniques of Photographing**

*David A. Williams, DDS; Jessica Volz, DNP; Erin E. Williams, BA*

***Pre-Registration Required—\$125***

**W21 Implementing Forensic Investigative Genetic Genealogy (FIGG): How to Put Figg Into Practice (Without Messing It Up for Everyone Else)**

Tuesday, February 14, 2023

1:00 AM - 4:30 PM

**CE Hours: 3.0**

**Learning Overview:** After attending this workshop, attendees will better understand: (1) the standards and policies being created for and by the forensic community; (2) a comparative study of the different technologies available and data-driven guidance on when to use each; (3) database hygiene and best practices for using FIGG databases in alignment with the Interim Department Of Justice (DOJ) policy and evolving terms of services; (4) how to prepare and what to consider when bringing FIGG in-house; and (5) case studies and practical guidance for learning investigative techniques from the perspective of law enforcement.

**Impact Statement:** This workshop will impact the forensic science community by providing the most up-to-date information on the policies, procedures, and best practices associated with putting FIGG into practice in an operational forensic environment. Attendees will receive summaries of all standards and policies presented. Example checklists for implementation, data evaluations, and comparisons will be made available. By sharing experiences and knowledge, the community can build a framework for a system that works together on a wider, coordinated scale.

**Program Description:** This workshop will provide scientific, experiential, and collaborative guidance on the critical aspects of a FIGG workflow, namely, emerging standards and policy, DNA technologies and limitations, genealogical databases and terms of use, investigative genealogical skill-building, and laboratory implementation planning. Practical experience and implementation options will be focused by a discussion of how real world cases are solved, which will guide operational and policy choices. Experts from forensic laboratories, law enforcement, and industry will present their consensus, data, and guidance to provide a toolkit for the forensic community to apply to their own investigations.

*Chair:*

**Ray A. Wickenheiser, DPS**

New York State Police Crime Lab System  
Albany, NY

*Presenters:*

**Kameran Wong, BS**

Verogen  
San Diego, CA

**Connie Bormans, PhD**

Gene by Gene  
Houston, TX

**Steven Smugeresky, BA**

Montgomery County Police Department  
Gaithersburg, MD

**Swathi A. Kumar, PhD**

GEDmatch  
San Diego, CA

**Mandi S. Van Buren, MPharm**

Kern Regional Crime Laboratory  
Bakersfield, CA

**Targeted Audience:** Criminalistics, General, Jurisprudence

**Knowledge Level Required:** Basic

**Program:**

- 1:00 PM – 1:10 PM      **Welcome and Introductions to Speakers**  
*Ray A. Wickenheiser, PhD*
- 1:10 AM – 1:50 PM      **Standards and Policy From the FIGG Steering Committee**  
*Ray A. Wickenheiser, PhD*
- 1:50 PM – 2:30 PM      **FIGG Technology Comparisons: A Breakdown of all the Options, and When to Use What**  
*Connie Bormans, PhD*
- 2:30 PM – 2:45 PM      **BREAK**
- 2:45 PM – 3:25 PM      **FIGG Database Hygiene: Bridging the Gap Between External Policy & Internal Practice**  
*Swathi A. Kumar, PhD*
- 3:25 PM – 4:05 PM      **Preparing for Implementation: What to Think About and How to Bring on FIGG**  
*Mandi S. Van Buren, MPharm*
- 4:05 PM – 4:30 PM      **Learning FIGG: Advice From Law Enforcement on How to Learn Investigative Genetic Genealogy**  
*Steven Smugeresky, BA*