

ENGINEERING & APPLIED SCIENCES

Thursday

Poster Session

11:30 am – 1:00 pm	D1	WITHDRAWN
11:30 am – 1:00 pm	D2	Forensic Reconstruction of a Fatal Stair-Related Fall Using Postmortem CT, Photogrammetry, and Virtual Reality: A Case Report Haruki Fukuda, MD, PhD*; Tadashi Hosoya, MD, PhD; Hiroyuki Tokue, MD, PhD
11:30 am – 1:00 pm	D3	A Study on an Analysis Methodology for Crowd Crush Accidents Kyeongmin Lee, MEng*; Chan-Seong Park, PhD

Thursday

Medical Topics

Moderator: Kurt Weiss, MS

Co-Moderator: Darren Franck, MSME

8:30 am – 9:00 am	D4	Built to Harm? Forensic Perspectives on Design-Induced Suicide and Self-Harm in Detention Facilities Mohsen Ghoreishi, MA*
9:00 am—9:20 am	D5	The Fluid Dynamics of Intravitreal Injections as It Relates to Needle Design Amanda Felstow*; Cynthia Bir, PhD; Andrew Davis, MPH; Brittany Hodges, MD; Kavon Rahmani, BSc; Pradeepa Yoganathan, MD
9:20 am—9:40 am	D6	Spectral Characterization and AI Modeling of Human Decomposition-Impacted Soils Over the Period of One Year Koushik Sanjay Saravana Kumar*; Lois Taylor, PhD; Jennifer DeBruyn, PhD; Sathish Samiappan, PhD
9:40 am—10:00 am	D7	The Use of Postmortem Computed Tomography in the Identification of Bodies: A Newly Emerging Technique to Complement Traditional Methods Maiko Yoshida, MD, PhD*; Yohsuke Makino, MD, PhD; Yukiko Uemura, MD; Ayaka Sakuma, PhD; Hirotaro Iwase, MD, PhD
10:00 am—10:15 am		BREAK

AI, Linguistics, and Forensic Methods

Moderator: Nathan Holmes

Co-Moderator: Carole Chaski, PhD

10:15 am—10:35 am	D8	Building the Artificial Intelligence Infrastructure for Forensics Mihir Joshi, BS*; Vikas Kakar*; Maneesha Pandey, MD; Avneesh Pradhan, MS Avneesh Pradhan, MS*
10:35 am—11:05 am	D9	Computational Linguistic Analysis in Financial Fraud Investigations David Weber, DBA*; Ruwan Adikaram, PhD; Carole Chaski, PhD

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11:05 am—11:25 am	D10	From Variation to Verification: A Basic Forensic Method for Identifying Single vs. Multiple Authors of Anonymous Letters Jelena Tabak, MA*; Andrea Ledić, MSc; Ivan Jerković, PhD
11:25 am—11:45 am	D11	Exploring Runtime Evolution in Android: A Cross-Version Analysis and Its Implications for Memory Forensics Babangida Bappah*; Aisha Ali-Gombe, PhD; Lauren Bristol, BS; Lamine noureddine, PhD; Sideeq Bello, BSc; Umar Farooq, PhD
11:45 am—1:00 pm	BREAK	

Multidisciplinary Session: Engineering & Applied Sciences and Forensic Nursing Science

Moderator: Max Veltman, PhD

Co-Moderator: Katie Wells, MPH

1:00 pm—1:20 pm	D12	Thoracic Aorta Injuries in Fatal Motor Vehicle Crashes: A Pilot Study and Comparative Mechanism Analysis Angela Harden, PhD*; Delaney Edwards, MA; Mary Cole, PhD; Brian Bautsch, MBA; Lauren Cardoni, MS; John Bolte, PhD
1:20 pm—1:40 pm	D13	Evaluating Thoracic Deflection and Injury Risk From Seatbelt Pretensioners in Small Female Occupants John Bolte, PhD*; Allison Guettler, PhD; Amanda Agnew, PhD; Yun-Seok Kang, PhD
1:40 pm—2:10 pm	E9	A Patient-Centered Forensic Nursing Model of Care for Victims of Law Enforcement Violence Maija Anderson, DNP*; Jacqueline Callari Robinson, RN; Jocelyn Anderson, PhD; Erin Pollitt, MS
2:10 pm—2:25 pm	BREAK	
2:25 pm—2:45 pm	D14	Seeing Beyond the Surface: Structured-Light 3D Scanning in a Prison Suicide by Hanging Simona Calabrese, MD*; Alessandro Nicolosi, MD*; Daniela Sapienza, PhD; Filippo Cucinotta, PhD; Fabio Salmeri, PhD; Cristina Mondello, PhD
2:45 pm—3:15 pm	E10	Smarter Than the Science: The History of Service Dogs Janean Fossum, BS*
3:15 pm—3:35 pm	D15	Multi-Modal Deep Learning for Bruise Age Estimation: Enhancing Forensic Reliability Through Integrated Visual and Contextual Data Mehrdad Ghyabi, PhD*; Katherine Scafide, PhD; David Lattanzi, PhD

Friday

Poster Session

11:30 am—1:00 pm	D16	A Forensic Investigation of Hydrogen-Driven Blasts in Galvanized Sprinkler Systems Songhie An, PhD*; Sungwan Park, MASc; Wooyong Park, MSc
11:30 am—1:00 pm	D17	Multidimensional Scaling of Hybrid Similarity Search Match Factors for Fentanyl Analogs Melinda Kleczynski, PhD*; Arun Moorthy, PhD; Anthony Kearsley, PhD*

ENGINEERING & APPLIED SCIENCES

Vehicle Forensic Investigations

Moderator: David Pienkowski, PhD

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| 8:30 am—8:50 am | D18 | Officer Confusion Leads to Improper Conclusions in a Fatal Head-On Accident
Darren Franck, MSME*; Harold Franck, MSEE |
| 8:50 am—9:10 am | D19 | Sun Altitude and Azimuth Causes a Fatal Crash With a Flatbed Trailer
Kurt Weiss, MSME* |
| 9:10 am—9:30 am | D20 | Heavy Truck Cab Integrity and the Swedish Test
Christopher Clarke, BS*; Brian Herbst, BS |
| 9:30 am—9:50 am | D21 | The Fine Points of the Interrelationship Between Vehicle Dynamics and Occupant Kinetics in Frontal Motor Vehicle Accidents (MVAs)
David Porta, PhD* |
| 9:50 am—10:05 am | | BREAK |

Environmental Topics

Moderator: Kurt Weiss, MSME

Co-Moderator: Harold Franck, MSEE

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| 10:05 am—10:25 am | D22 | The Detection and Forensic Documentation of Clandestine Pollutant Discharges in Federal Watercourses in Brazil
David Domingues Pavanelli, PhD* |
| 10:25 am—10:45 am | D23 | WITHDRAWN |
| 10:45 am—11:15 am | D24 | Robust Linking Estimation in the Graded Response Model With Contaminated Ability Distributions
Ibrahim Almansour, MS*; Larry Tang, PhD |
| 11:15 am—11:35 am | D25 | Aerosols With Addresses: A Method for Testing Aerosol Dispersion in Variable Environments
Catherine Reyes, PhD* |
| 11:35 am—1:00 pm | | BREAK |
| 1:00 pm—1:30 pm | D26 | The Aberrant Behavior of Gas Appliances That Incorporate Flame Arrestors Being Indicative of Fugitive Fuel Gas Intrusion by Soil Migration
Tim Dunn, MS* |
| 1:30 pm—2:00 pm | D27 | Lessons From the Wreckage: Forensic Architecture and Construction Failures Every Professional Should Understand
Mohsen Ghoreishi, MA* |
| 2:00 pm—2:20 pm | D28 | Technical Cooperation in Forensic Engineering and Innovation in Dredging Survey
Jose Medeiros, DSc*; Julio Neto, MSc; Thiago Albuquerque, DSc*; Vladimir Paz, BSc |
| 2:20 pm—2:40 pm | D29 | Hydrogen Explosion in Sprinkler Pipes: A Forensic Chemical Analysis
Songhie An, PhD*; Sungwan Park, MAsC; Wooyong Park, MSc |
| 2:40 pm—3:10 pm | D30 | A Mechanical and Metallurgical Investigation of Cracks Within a Pipeline Repair
Bart Kemper, PE* |