



NATIONAL FORENSIC SCIENCE WEEK

2023 Graduate Research Symposium and Poster Session

Oral Presentations: Agenda

Wednesday, September 20, 2023

Time	Presentation Topic
1:00 PM – 1:05 PM ET	Welcome and Opening Remarks <i>Tracey Johnson National Institute of Justice</i>
1:05 PM – 1:25 PM ET	Fracture Mechanics Basis for Comparison Scales of Fracture Matching <i>HyeokJae Lee Iowa State University</i>
1:25 PM – 1:45 PM ET	Gauge Repeatability and Reproducibility for Comparative Physical Match by 3D Microscopy <i>Joshua Berlinski Iowa State University</i>
1:45 PM – 2:05 PM ET	Expert Algorithm for Substance Identification Applied to Cathinones <i>Alexandra I. Adeoye West Virginia University</i>
2:05 PM – 2:25 PM ET	Everlasting Bubble Wall for Electroanalysis of Aerosolized Illicit Substances <i>Kathryn J. Vannoy Purdue University</i>
2:25 PM – 2:45 PM ET	Targeted Genotyping of DNA Isolated from Rootless Hair <i>Balaji Sundararaman University of California, Santa Cruz</i>
2:45 PM – 3:05 PM ET	Designing a Novel Reagent and Protocol for Unified Recovery of Nucleic Acids, Proteins, and Small Molecules from Trace and Degraded Samples <i>Coral Smith West Virginia University</i>
3:05 PM – 3:25 PM ET	Primary Atomization of Blood and Surrogate Mixtures Relevant to Bloodstain Pattern Analysis <i>Labiba Imtiaz Kaya Iowa State University</i>
3:25 PM – 3:30 PM ET	Closing Remarks <i>Tracey Johnson National Institute of Justice</i>



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Poster Session

Browse the virtual poster gallery at your leisure and check out all the interesting research projects from students across the globe!

Presentation Topics

Anthropology, Pathology, & Medicolegal Death Investigation

Feline Forensics: Blow Fly Colonization & Decomposition

Kelly Bagsby | University of Florida

Fungal Interaction in Mammalian Decomposition in the New Jersey Pine Barrens

Jacquelyn Gross | Rutgers University, Camden

Evaluating the Durability and Stability of Decomposition Training Aids Under Freezing Storage Conditions

Andrea Medrano | Texas Tech University

Detection of Yellow Fever Virus via Analysis of Dental Pulp

Kyra Miller | Rutgers University, Camden

Identification of Biomarkers Associated with Prolonged Starvation in Cat Bones

Annagrace Radocaj | Duquesne University

Determining the Variability in Color in Human Head Hair

Emma Redman | Cedar Crest College



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Poster Presentations (continued)

Forensic Biology & DNA

Development of the Domesticated Hand

Aldrin Alviar | University of California, Davis

The Analysis of Chemical Components in Sexual Lubricants: A Comparative Study of Swab Types Analyzed by Spectroscopic Techniques

Safiya Best, MS | University of Central Florida

Single-Cell Genetics Enables Robust Database Searches Across Mixture Complexities

Qhawe A. Bhembe, MS | Rutgers University, Camden

Determining an Optimal Diet and Rearing Protocol for *Phormia regina*

Vanessa Cooper | Purdue University

Investigation of Trace DNA Samples from Objects in Pickpocket Scenarios

Lauren Hoopes | Arcadia University

Impacts of Desiccants on DNA Quantity and Quality in Sexual Assault Kits Over One Year

Catherine Hull | Duquesne University

The Quantification and Characterization of Cell-free DNA in Touch Samples

Veronica Poole | Syracuse University

Analyzing Changes in Soil Microbiota During Three Stages of Decomposition

Madeline Robinson | Curry College

Investigation into the Aging Mechanism of Bloodstains Post-Deposition Using Steady-State Fluorescence Spectroscopy

Alexis Weber | University at Albany, State University of New York



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Poster Presentations (continued)

Impression, Pattern, & Trace Evidence

Assessing the Impact Dynamics of Less Lethal Bean Bag Ammunition

Brooke Fontaine | John Jay College

Propagation of Damage on Shoe Soles

Sara Jerde | Purdue University Northwest

Elemental Analysis of Electrical Tapes—Capabilities of Modern μ -XRF Technology

Lacey Leatherland | West Virginia University

Recovering Trace Evidence from Archival Samples

Natalia Pedraza | Syracuse University

Analysis of Burned Fabrics Using FTIR

Jaclyn Scholz | University of Alabama at Birmingham

The Odor Behind a Shot: Chemical Characterization of Volatiles from Ammunition

Salem Smith | Texas Tech University

The Effects of Fingerprint Development Techniques on Cartridge Case Identification

Sasha Valentino | Duquesne University

Electrochemical Sensors for Detection of Gunshot and Black Powder Residues

Thinnapong Wongpakdee | Florida International University



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Poster Presentations (continued)

Seized Drugs & Toxicology

The Importance of Xylazine Test Strips and Additional Accuracy Measurements

Margaux Marcus, Adriana Rios, and Kiera Cobb | Arizona State University

Pesticides and Blow Flies: How Do Clothianidin and Bifenthrin Affect Calliphoridae (Diptera) Oviposition?

Teomie Rivera-Miranda | Purdue University

Identification of the Synthetic Cannabinoids BZO-POXIZID and MDA-19 Using GC-MS

Samantha Way | University of Alabama at Birmingham

Micro-FTIR Analysis of Drug-Laced Fingerprints

Kendall Wontor | University of Mississippi

Detecting Drugs in Wastewater Samples from Birmingham, Alabama, Using GC-MS

Daija Young | University of Alabama at Birmingham

Additional Topics

The Makings of a High-Profile Case: How Media Bias Influences Forensic Investigations in Missing Person Cases

Jennifer Fertel | Duquesne University

Comparing Insanity Defense Evidence: Mental Health Assessments vs. Neuroimaging

Kaitlyn Svencer | Duquesne University

Acute Toxicological Effects of Copper of *Palaemonetes pugio* L. (Grass shrimp)

Charrel Williams | Southern University at New Orleans

Forensic Study of Air Quality and COVID-19 Infection Rates

Taylor Williams | Southern University at New Orleans