

AFTE 2019 Technical Conference  
Nashville, TN

**Monday Morning**

**Keynote: Remembering Back and Looking Forward: AFTE at 50**  
Honorable Judge Barbara Howe

**AFTE 2020 Update**

Mallory Foster, *Texas Department of Public Safety*  
Steven Aston, *Austin Police Department Crime Laboratory*

**OSAC Update**

Mark Keisler, *Indiana State Police Crime Laboratory*  
Todd Weller, *Weller Forensics*

**AAFS Standards Board Update**

Gregory Laskowski, *Criminalistics Services International, LLC*

**Comparison of Several Blood Removal Solutions and Their Effects on Gunshot Residue**  
Kulvir Sarai, *Washoe County Sheriff's Office Forensic Science Division*

**Tuesday Morning**

**Pizza Bomber (Collar Bomb)**

Carlo J. Rosati, *United Nations Firearms and Toolmarks Technical Advisor*

**A Curious Case of Bogus Toolmarks**

Gerard Dutton, *Tasmania Police Department*

**National Firearm Reference Population Database**

Xiaoyu Alan Zheng, *National Institute of Standards and Technology (NIST)*  
Erich D. Smith, *Federal Bureau of Investigation (FBI)*

**Features Present on Additively Manufactured Polymer Components: Selective Laser Sintering**

Corey W. Scott, *FBI Laboratory's Terrorist Explosive Device Analytical Center*

**The Validation of 3D Virtual Comparison Microscopy in the Comparison of Expended Cartridge Cases**

Laura Knowles, *Royal Canadian Mounted Police (RCMP)*

**A High-Resolution Scanner for Nondestructive Visualization of Gunshot Residue Patterns On Fabric**

Mike Kusluski, *Madonna University*

**Update on the Brundage/Hamby RUGER 10 Consecutive Barrel Research Project**

James Hamby, Ph.D

**Absence of Evidence? A Shooting Incident Reconstruction**

Alexander Jason, CSCSA, *Anite Group*

**Tuesday Afternoon**

**Wound Ballistics: Shots in Ballistic Gelatin Torso and Analysis through Computed Tomography Scanning**

Nikolaos E. Tsiatis, *Hellenic Police*

**Evaluation of the Individuality of GLOCK 9mm Aperture Shear Marks**

James Hamby, Ph.D

**I Shot the Kitchen but Not the Police: OIS Investigation Involving 5.45x39mm Ammunition**

Gregory Laskowski, *Criminalistics Services International, LLC*

**Secondary Movement of Fired Cartridge Cases**

Matthew Noedel, *Noedel Scientific*

**Reproducibility of Automated Bullet Matching Scores Using High Resolution 3D LEA Scans**

Kiegan Rice, *Center for Statistics and Applications in Forensic Evidence (CSAFE) at Iowa State University*

**Understanding the Black Oxide Chemical Conversion Process It Is Applied to Bullets**

Mallory Foran, *Cuyahoga County Regional Forensic Science Laboratory*

**The Utility of Double-Casting for Creating Cartridge Case Reproductions**

Eric Law, *West Virginia University*

**Bullet Subclass "Warning Coefficient"**

Danny Roberge, Ph.D, *Ultra Forensic Technology*

**Wednesday Morning**

**Can We Be Confident in our NIBIN Associations?**

Nathan Von Rentzell, *Denver Police Department*

**Clues from Impact: The Bullet "Autopsy"**

R.T. Wyant, *Washington State Patrol Laboratory*

**Automatic Matching of Hamby Sets: Friends, False Friends, and Clones**

Heike Hofmann, *Center for Statistics and Applications in Forensic Evidence (CSAFE) at Iowa State University*

**What's New in Ammunition/Don't Assume Headstamp ID**

George Kass, *Forensic Ammunition Service*

**Metal Injection Molding - Manufacturing Review and Implications for Comparison and IBIS Performance**

Ron Nichols, *Nichols Forensic Science Consulting*

**Novel Distance Estimation Method for a Shotgun Discharge At Close Range**

Dr. Rachel Bolton-King, *Staffordshire University*

**Wednesday Afternoon**

**Evaluation of the VisionX Comparison Microscope and Its Potential Impact on the Firearms and Toolmark Community**

Mark S. Dreyfuss, PhD., *Maryland State Police Department*

**Physical Matching and Microscopic Comparison of Broken Knife Blades**

Jaco Swanepoel, *San Francisco Police Department*

**A2LA Accreditation**

Elizabeth Carbonella, *American Association for Laboratory Accreditation (A2LA)*

**Characterization of a Non-Linear Photometric Stereo Sensor Optimized for Fired Bullet Topography Capture**

Serge Levesque, *Ultra Electronics Forensic Technology*

**Thursday Morning**

**Feasibility of Objective Identification for Inoperable Firearms**

Michael Stocker, *National Institute of Standards and Technology (NIST)*

**The Use of Drone Imaging for Ejection Pattern, Trajectory, and Crime Scene Analysis**

Adam Hartley, *Public Eye Forensics*

**A Profile/Image Reconstruction Method for Objective Comparison of Deformed Bullets**

John Song, *National Institute of Standards and Technology (NIST)*

Robert Thompson, *National Institute of Standards and Technology (NIST)*

**Frangible Ammunition: Past and Present**

Lucien C. Haag, *Forensic Science Services Inc.*

**Improved Algorithm-Based Cartridge Case Comparison, Towards a Statistical Model**

Ryan Lilien, *Cadre Research*

Eric Meschke, *Cadre Research*

**Results of the 2018 3D Virtual Comparison Microscopy Error Rate Study (VCMERS)**

Ryan Lilien, *Cadre Research*  
Todd Weller, *Weller Forensics*

**Pressure Factors in Cartridge Case Comparison**

James Hamilton, *West Virginia University*

**Trajectories from Single Impact Sites - The Lead-In /Rocker Point Method**

Michael Haag, *Albuquerque Police Department*

**Thursday Afternoon**

**Firearms ID by Acoustic Signals of Firearms Mechanism Operation**

Pavel Giverts, *Israel National Police*

**European Distribution and Occurrence of Firearms Ammunition (EDOFA)**

Jan De Ceuster, *Nationaal Instituut voor Criminalistiek en Criminologie*

**Determining Time Since Discharge of Firearms Using a Thermal Imaging Device**

Ashley Martin, *Albuquerque Police Department*