Forensic Comparative Science Specialists, LLC phone: 603.568.2668

P.O. Box 604 email: sostrowski@focossforensics.com

Concord, NH 03302-0604 web: <u>FocossForensics.com</u>

#### **SPECIALTIES**

Firearms, toolmarks, latent prints, obliterated serial number restoration, physical fit/fracture comparisons, and gunshot residue/ muzzle-to-target shooting distance determination.

# **CURRENT EMPLOYMENT**

July 2007 - Co-Owner & Supervising Scientist

Present Forensic Comparative Science Specialists, LLC

Concord, New Hampshire

Duties include: Providing consultation in a number of disciplines for forensic laboratories/units, the legal community in both criminal and civil matters, and private parties. Conducting administrative and technical reviews of case work. Performing examinations or reexaminations of physical evidence. Assessing transcripts from trials, hearings and depositions. Offering expert testimony. Accreditation preparation to include the development of protocols, procedures, and training programs. Providing technical training in the areas of crime scene processing, forensic photography, and technical aspects of various forensic science disciplines including: fingerprints, firearms, toolmarks, physical fit/fracture comparisons, obliterated serial number restoration, and gunshot residue /muzzle-to-target shooting distance determination.

January 2013 - Criminalist III

Present New Hampshire State Police Forensic Laboratory

Concord, New Hampshire

Duties include: Conducting examinations of physical evidence in the areas of latent prints, firearms, toolmarks, physical fit/fracture comparisons, obliterated serial number restoration, and powder gunshot residue/muzzle-to-target shooting distance determination in conjunction with criminal cases. Writing formal laboratory reports summarizing examination results. Testifying in court as an expert witness. Conducting administrative and technical reviews of other scientists' casework. Developing, documenting, preserving and collecting physical evidence at crime scenes. Coordinating examinations of physical evidence in major cases. Training new forensic scientists. Operating the Tri-State and the FBI National Automated Biometric Identification Systems (ABIS). Technical Manager for the disciplines of Friction Ridge, Firearms/Toolmarks and Crime Scene Processing. Supervisor of the Pattern Evidence and Firearms/Toolmarks Unit.

### **EDUCATION**

Master of Science Degree - May 1996 The University of New Haven West Haven, Connecticut Major - Forensic Science Bachelor of Science Degree - May 1994 Dickinson College Carlisle, Pennsylvania Major - Biology

### PROFESSIONAL EXPERIENCE

August 2004 - January 2013 Criminalist II

New Hampshire State Police Forensic Laboratory

Concord, New Hampshire

July 1999 - August 2004 Criminalist I

New Hampshire State Police Forensic Laboratory

Concord, New Hampshire

## **PROFESSIONAL TRAINING**

Resident Training Programs New Hampshire State Police Forensic Laboratory Concord, New Hampshire

July 1999 - August 2000 Latent Prints

December 2001 - June 2002 Serial Number Restoration

September 2000 - April 2004 Firearms, Toolmarks, Physical Match, Gunshot Residue

#### **INTERNSHIPS**

February 1996 - April 1996 Bridgeport Police Department, Identification Unit

Bridgeport, Connecticut

August 1995 - December 1995 West Haven Police Department, Identification Division

West Haven, Connecticut

#### **PROFESSIONAL ORGANIZATIONS**

Association of Firearm and Tool Mark Examiners (AFTE)

Regular Member 2009 - Present Provisional Member 2004 - 2009 Membership Number #2409

International Association for Identification (IAI)

Active Member 2000 - Present

Membership Number #17716

New England Area Firearms and Tool Mark Examiners Group (NEAFTE)

Active Participant 2000 - Present

New England Division International Association for Identification (NEDIAI)

Regular Member 2000 - Present

Membership Number #386

Northeastern Association of Forensic Scientists (NEAFS)

Regular Member 2004 - 2019 Membership Number #1377

#### PROFESSIONAL CERTIFICATIONS

Association of Firearm and Tool Mark Examiners

- ♦ Firearms (2006 Present)
- ◆ Toolmarks (2006 Present)
- ◆ Gunshot Residue/Distance Determination (2006 Present)

International Association for Identification

◆ Latent Prints (2003 – Present) Certification # 02-44

## **RECOGNITION/ AWARDS**

- (6) Letters of Recognition
- (36) Letters of Appreciation
- IAI Presidential Citation, Members of the Forensic Comparative Examination Committee for expeditious work formulating the IAI's response to the forensic science information solicitation from the President's Council of Advisors on Science and Technology (PCAST) at the White House, 2016
- Best Original Article, *N.E.D.I.A.I. Journal*, for "Leucocrystal Violet: Enhancing Your Blood Processing Experience," New England Division International Association for Identification, 14th Annual Educational Conference, 2005

#### **PAPERS/ PUBLICATIONS**

- Ostrowski, S., "Identification of a Toolmark on Human Skull Utilizing Cattle Blade Bones as Test Medium," *AFTE Journal*, vol. 38, no. 4, pp. 348-55, 2006
- Ostrowski, S. and Dupre, M., "Fingerprint Impression Development Using a Vacuum Box," *Journal of Forensic Identification*, vol. 56, no. 3, pp. 356-63, 2006
- Ostrowski, S., "Leucocrystal Violet: Enhancing Your Blood Processing Experience," *N.E.D.I.A.I. Journal*, vol. 10, no. 2, 2005
- Contributing editor, *Handbook of Forensic Services*, New Hampshire Department of Safety, Division of State Police Forensic Laboratory, 1<sup>st</sup> ed., 2002
- Ostrowski, S., "Simultaneous Impressions: Revisiting The Controversy," *The Weekly Detail*, no. 13, 2001 http://www.clpex.com/Articles/TheDetail/1-99/TheDetail13.htm
  - Reprinted in N.E.D.I.A.I. Journal, vol. 10, no. 3, 2005
  - Reprinted in Lone Star Forensic Journal, vol. 59, no. 4, 2005

## **ARTICLES/ COMMENTARIES**

- Ostrowski, S., "New Hampshire Supreme Court Reverses Langill," *The Weekly Detail*, no. 347, 2008 <a href="http://www.clpex.com/Articles/TheDetail/300-399/TheDetail347.htm">http://www.clpex.com/Articles/TheDetail/300-399/TheDetail347.htm</a>
  - Reprinted in N.E.D.I.A.I. Journal, vol. 13, no. 1, 2008
- Ostrowski, S., "New Hampshire Supreme Court Hears Arguments in Langill Appeal," *The Weekly Detail*, no. 341, 2008. <a href="http://www.clpex.com/Articles/TheDetail/300-399/TheDetail341.htm">http://www.clpex.com/Articles/TheDetail/300-399/TheDetail341.htm</a>
- Ostrowski, S., "In the Wake of the Langill Decision," Missouri Division of the International Association for Identification website, 2007. http://www.moiai.org/documents/LangillDecision.pdf

- Ostrowski, S., "Coffey Rules on Reconsideration of New Hampshire's Langill Decision," *The Weekly Detail*, no. 296, 2007. <a href="http://www.clpex.com/Articles/TheDetail/200-299/TheDetail296.htm">http://www.clpex.com/Articles/TheDetail/200-299/TheDetail296.htm</a>
  - Reprinted in *Dactylogram*, vol. 2, no. 5, 2007
- Ostrowski, S., "Judge Grants Motion to Exclude Latent Fingerprint Evidence," *The Weekly Detail*, no. 285, 2007. <a href="http://www.clpex.com/Articles/TheDetail/200-299/TheDetail285.htm">http://www.clpex.com/Articles/TheDetail/200-299/TheDetail285.htm</a>
  - Reprinted in Evidence Technology Magazine, vol. 5, no. 2, 2007
  - Reprinted in *The California Identification Digest*, vol. 7, no. 2, 2007
  - Reprinted in *The Print*, vol. 23, no. 2, 2007

Ostrowski, S., "Daubert Challenge to Simultaneous Impressions in Massachusetts," *The Weekly Detail*, no. 213, 2005. http://www.clpex.com/Articles/TheDetail/200-299/TheDetail213.htm

#### LECTURES/ PRESENTATIONS

Case Study: *Murder of Kelly Robarge*, (co-presented with <u>Sonia, J.</u> and <u>Hennessy, P.</u>) 24<sup>th</sup> Annual NEDIAI Education & Training Conference, Portsmouth, NH, 2017

Poster Presentation: *Breechface Marks vs. Manufacturing Marks on Federal Cartridge Cases: A Case Study*, 100<sup>th</sup> Annual IAI Educational Conference, Sacramento, CA, 2015

Breechface Marks vs. Manufacturing Marks on Federal Cartridge Cases: A Case Study, 18<sup>th</sup> Annual New England Area Firearms Examiners Conference, East Hartford, CT, 2014

Preparing for a Daubert Hearing on Short Notice,

20<sup>th</sup> Annual NEDIAI Education & Training Conference, Nashua, NH, 2012

Overview of the NAS Forensic Science Report and How it Pertains to Pattern Evidence Examinations,

- 17<sup>th</sup> Annual NEDIAI Education & Training Conference, Freeport, ME, 2009
- 13<sup>th</sup> Annual New England Area Firearms Examiners Meeting, Kingston, RI, 2009

Toolmark Recovery Workshop,

- 16<sup>th</sup> Annual NEDIAI Education & Training Conference, Portsmouth, NH, 2008
- Inaugural NEDIAI & NEAFS Joint Educational Conference & Training Seminar, Manchester, VT, 2010

Toolmark and Physical Match Evidence at Crime Scenes,

16<sup>th</sup> Annual NEDIAI Education & Training Conference, Portsmouth, NH, 2008

Overview of Firearms and Ammunition Evidence,

Assistant Deputy Medical Examiners' In-Service Training, Concord, NH, 2008

Collection and Preservation of Firearms, Toolmark, Physical Match and Gunshot Residue Evidence, Evidence Recovery Academy, Rochester, NH, 2008

Identification of a Hatchet Toolmark on a Homicide Victim's Skull: A Case Study,

- 15<sup>th</sup> Annual NEDIAI Education & Training Conference, Newport, RI, 2007
- 12<sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT, 2008

Daubert: Coming to a Courtroom Near You, (co-instructed with Corson, L.) 15<sup>th</sup> Annual NEDIAI Education & Training Conference, Newport, RI, 2007

The Cast Breech Block of a Sig Sauer Mosquito Pistol and Its Effect on Cartridge Case Identifications,

- 10<sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT, 2007
- 39<sup>th</sup> Annual AFTE Training Seminar, Honolulu, HI, 2008

Forensic Evidence at Shooting Scenes, (co-instructed with Dupre, M.)

NH State Police Major Crime Unit and Troop Detectives, Department of Safety, Concord, NH, 2007

Processing Guns for Latent Impressions: What Every Firearms Examiner Wants You to Know,

- 91<sup>st</sup> Annual IAI Educational Conference, Boston, MA, 2006
- Boston Police Department, Firearms Analysis Section, Boston, MA, 2010
- Boston Police Department, Latent Print Section and Evidence Intake Unit, Boston, MA, 2011

Utilizing Cattle Blade Bones as Test Medium in the Identification of a Toolmark on Human Skull, 37<sup>th</sup> Annual AFTE Training Seminar, Springfield, MA, 2006

New Hampshire Daubert Update,

3<sup>rd</sup> Annual Northeast Latent Print Forum, Meriden, CT, 2005

Forensic Field Training,

- Weare Fire and Safety Complex, Weare, NH, 2004
- New Hampshire Fish and Game Department, Keene, NH, 2004

From IAFIS Hit to Problem Identification: A Case Study,

2<sup>nd</sup> Annual Northeast Latent Print Forum, Meriden, CT, 2004

Leuco Crystal Violet: Crime Scene and Laboratory Enhancement of Blood Impressions, 12<sup>th</sup> Annual NEDIAI Education & Training Conference, Manchester, NH, 2003

How Taking Quality LiveScan Impressions Affects Forensic Latent Examinations, NH LiveScan Users Group Fall Meeting, NH State Police Criminal Records Unit, Concord, NH, 2003

Forensic Science Technology and NHSP Laboratory Capabilities,

- Merrimack County Investigators Group, Concord, NH, 2003
- Belmont Police Department, Belmont, NH, 2003

Impression Evidence Documentation, Enhancement, Preservation and Collection,

Belmont Police Department, Belmont, NH, 2003

Fingerprint Techniques Workshop,

The New England Commission on Forensic Education, Danvers, MA, 2000

Guest speaker at various high schools, social organizations and criminal justice/legal associations throughout New Hampshire.

#### **TEACHING ACTIVITIES**

Adjunct instructor at Boston University School of Medicine, Biomedical Forensic Science Graduate Program, Boston, MA. Co-Instructor for course entitled:

Forensic Science 706: Pattern Evidence Analysis (with lab), Spring 2011-2013, Fall 2014-2019

Guest lecturer at The University of New Hampshire, Main Campus, Durham, NH.

Presented *Firearms, Toolmarks and Other Forensic Comparative Science Evidence* for course entitled: Biology 420: *Introduction to Forensic Sciences*, Fall 2009-2012, Spring 2014-2020

Adjunct instructor at New Hampshire Police Standards and Training Council, Concord, NH.

Co-instructor for lectures entitled:

- Taking Quality Inked Impressions and Processing for Latent Impressions (2005-2006, 2009-2011)
- Taking Quality Inked Impressions combined with Impression Evidence: Documentation, Preservation and Collection (2006-2009)
- Utilizing Fingerprint Evidence in Your Investigations (2004)
- Taking Quality Inked Impressions (2002-2004)
- *Using the Tri-State and Integrated AFIS Systems as Investigative Tools* (2001)

Guest lecturer at New Hampshire Police Cadet Training Academy, Hesser College, Manchester, NH Instructor for lecture entitled:

Forensic Science: An Introduction to Physical Evidence (2001, 2004)

Guest lecturer at New Hampshire Bar Association Continuing Legal Education (CLE) Program, Concord, NH Presented topic "Toolmarks & Firearms Related Evidence" at the following programs:

- Forensic Science: Inside the NH State Forensic Laboratory (2016)
- Forensic Analysis and the New Hampshire Crime Lab (2008)

### PROFESSIONAL ACTIVITIES

Chair, AFTE Certification Program, May 2017-Present

Member of Forensic Comparative Examination Committee, IAI, 2015-Present

Member of Forensic Identification Standards Committee (III), IAI, 2009-2014

Member of Web Oversight Committee (Ad-Hoc), AFTE, 2008-2009

Collaborative Testing Services, Inc. (CTS), beta test evaluator:

- Shooting Reconstruction: Bullet Trajectory Angle Determination Research Test, 2017
- Reloaded Cartridge Case Research Test, 2016
- Toolmark Pre-Distribution Proficiency Test (x2), 2006

Participant in reliability, validation and other research studies:

- Virtual Comparison Microscopy Topography Resolution Study, Cadre Forensics, Weller Forensics & Johnson County (KS) Sheriff's Office Criminalistics Laboratory, 2019
- The Validity of Cartridge Case Comparisons Study, Iowa State University of Science and Technology Forensic Psychology Laboratory, 2019
- Visual Bootstrapping Study, Indiana University Department of Psychological and Brain Sciences, 2019
- Virtual Comparison Microscopy Error Rate Study, Cadre Forensics, Weller Forensics & RCMP, 2018
- Testing the Accuracy and Reliability of Palmar Friction Ridge Comparisons: A Black Box Study, RTI International and University of Lausanne, 2018
- Glock Firing Pin Aperture Shear Mark Study, Netherlands Forensic Institute, 2018
- Firearms Decision Analysis Black Box Study, FBI & Ames Laboratories, 2017
- Identification of Fired Bullets Without a Firearm Part II, Palm Beach County Florida Sheriff's Office, 2017

- Error Rates in Toolmarks Comparison of Snap-Off Blades, Singapore Health Sciences Authority, 2017
- Deconstructing Decision-Making in the Analysis Phase of Latent Print Examinations: A White Box Study, Heidi Eldridge, RTI International, 2017
- Identification of Fired Bullets Without a Firearm, Palm Beach County Florida Sheriff's Office, 2017
- Virtual Microscopy for the Reaching of Comparative Conclusions in Firearms Analysis, Dr. Ryan Lilien, Cadre Research Labs, 2016
- 40S&W Cartridge Case Isolated Pairs, Indiana State Police Laboratory Division, Firearms Identification Unit, 2016
- Investigation of False Positive and False Negative Errors for Cartridge Casing Comparisons, Midwest Forensics Resource Center at the Ames Laboratory USDOE, 2013
- Five Consecutively Manufactured Glock Gen4 Barrels, Louisiana State Police Crime Lab, Physical Evidence Unit, 2013
- Ten Consecutively Manufactured Hi-Point Firing Pins, Florida Department of Law Enforcement, Orlando Regional Operation Center, 2012
- Ten Consecutively Manufactured Glock EBIS (Miami) Barrels: Part II Same EBIS Pattern, Miami-Dade Police Department, Forensic Identification Section, 2012
- Detection of Forged Fingerprints, Boston Police Department, Latent Print Unit, 2011
- Ten Consecutively Manufactured Ruger Slides: Part II Durability Test, Miami-Dade Police Department, Forensic Identification Section, 2010
- Ten Consecutively Manufactured Hi-Point Slides, New York City Police Department, Firearms Analysis Unit, 2010
- Ten Consecutively Manufactured Ruger Slides, Miami-Dade Police Department, Forensic Identification Section, 2010
- Ten Consecutively Manufactured Glock EBIS (Miami) Barrels, Miami-Dade Police Department, Forensic Identification Section, 2010
- Informing the Judgments of Fingerprint Analysts Using Quality Metric and Statistical Assessment Tools, Minnesota Bureau of Criminal Apprehension and Ecole des Sciences Criminelles, University of Lausanne, Switzerland, 2010
- Statistical Analysis of Toolmark Striations (utilizing striated makes from both sides of 50 consecutively made screwdriver tips), Dr. L. Scott Chumbley, Ames Laboratory for Materials Science and Engineering at Iowa State University, 2008
- Ten Consecutively Rifled 9mm Ruger Pistol Barrels, Dr. James E. Hamby, International Forensic Science Laboratory & Training Centre, Indianapolis, IN, 2007
- Fracture Patterns of Consecutively Manufactured Hacksaw Blades, Virginia Department of Forensic Science, Firearms & Toolmark Unit, 2007
- The Application of ACE-V to Simultaneous (Cluster) Impressions, South Carolina Law Enforcement Division, Latent Print/Crime Scene Department, 2006

#### Conference Technical Program Chair:

- 24<sup>th</sup> Annual NEDIAI Educational Conference, Portsmouth, NH, 2017 (Co-Chair)
- 20<sup>th</sup> Annual NEDIAI Educational Conference, Nashua, NH, 2012
- Inaugural NEDIAI & NEAFS Joint Educational Conference and Training Seminar, Manchester, VT, 2010 (Co-Chair)
- 16<sup>th</sup> Annual NEDIAI Educational Conference, Portsmouth, NH, 2008
- 37<sup>th</sup> Annual AFTE Training Seminar Host Committee, Springfield, MA, 2006 (Co-Chair)

### Conference Program Moderator:

• The Forensic Scientist's Response to the NAS Report: A Panel Discussion with Joseph Bono, Robert Garrett, Dennis Hilliard, Noah Bookbinder, Kenneth Melson, Mark Stolorow, and Robin Jones, NEDIAI &

- NEAFS Joint Educational Conference and Training Seminar, Manchester, VT, 2010 (Co-Moderator)
- National Academy of Sciences Report: A Panel Discussion with Richard Samdperil, Esq., Lisa Steele, Esq., Kenneth Martin, Charles Caouette, Robert Garrett and John Vanderkolk, 17<sup>th</sup> Annual NEDIAI Education & Training Conference, Freeport, ME, 2009
- Daubert Fingerprint Issues: A Panel Discussion with Pat Wertheim, Dr. Simon Cole, Lisa Steele, Esq. and Kirsten Wilson, Esq., 14<sup>th</sup> Annual NEDIAI Education & Training Conference, Burlington, VT, 2005

#### **CONTINUING EDUCATION**

2019 An Update on Strengthening Forensic Science in the United States: A Decade of Development webinar, AAAS and NIST

Comparison of Plantar Friction Ridge Impressions, Ron Smith & Associates, Dedham, MA

Slide Fire Familiarization Workshop, AFTE, Nashville, TN

How Jurors Evaluate Fingerprint Evidence Webinar, Center for Statistics and Applications in Forensic Evidence (CSAFE)

Fingerprint Processing on Difficult Surfaces Webinar, Texas Forensic Science Academy & Texas A&M University Engineering Extension Service

Emerging Forensic Research in Firearms and Toolmarks Webinar: Audio Forensics of Gunshot Sounds & Restoration of Defaced Serial Numbers, Forensic Technology Center of Excellence

Overview of the Exculpatory Evidence Schedule, New Hampshire Attorney General's Office, Concord, NH 3D Virtual Microscopy and Objective Identification for Firearms Identification Workshop, AFTE, Charleston, WV

Class Characteristics of Toolmarks in Bone and Cartilage Workshop, AFTE, Charleston, WV

Subclass Characteristics Workshop, AFTE, Charleston, WV

Machining for the Firearm / Toolmark Examiner Workshop, AFTE, Charleston, WV

Impression, Pattern and Trace Evidence Symposium (web stream), National Institute of Justice and Forensic Technology Center of Excellence

A Close Look at 3D Microscopy for Firearms Identification Webinar, Forensic Technology Center of Excellence

2017 Trajectory Analysis from Abnormal Surfaces Workshop, NEDIAI, Portsmouth, NH

Firearms Lecture Series workshop, NEDIAI, Portsmouth, NH

MorphoTrak Automated Fingerprint Identification System site training, MorphoTrak/IDEMIA, Concord, NH Making Optimal Decisions in Identifications and Exclusions – A Scientific Approach Workshop, IAI, Atlanta, GA

Reducing Erroneous Exclusions Workshop, IAI, Atlanta, GA

Fracture Examination Workshop, IAI, Atlanta, GA

Foundations of Courtroom Testimony Online Workshop, Texas Forensic Science Academy & Texas A&M University Engineering Extension Service

Toolmark Examination Training Course, RI State Crime Laboratory, Kingston, RI

Minimizing Bias in Forensic Decision Making Online Workshop, Consolidated Continuing Education & Professional Training (CONCEPT) and Dr. Itiel Dror

2016 Understanding Bias and Courtroom Testimony Panel Discussion, NEDIAI, Dedham, MA

New Paradigm for Fingerprint Reporting W/O Individualization Webinar, Forensic Technology Center of Excellence

Foundations of Forensic Photography Online Workshop, Texas Forensic Science Academy & Texas A&M University Engineering Extension Service

Shooting Scenes - Staged or Not Staged - Find the Red Flag Indicators Workshop, AFTE, New Orleans, LA

"Ring of Fire" Workshop, AFTE, New Orleans, LA

2015 Firearm Markings online training module, International Firearm Specialists Academy
Ammunition online training module, International Firearm Specialists Academy
Forensic Firearm Examination Webinar, Integrated Forensic Laboratories & NMS Labs
Foundations of Fingerprint Comparison Online Workshop, Texas Forensic Science Academy &
Texas A&M University Engineering Extension Service

False-Positive and False-Negative Error Rates in Cartridge Case Comparisons Webinar, Forensic Technology Center of Excellence

Special Topics in GSR Webinar, Forensic Technology Center of Excellence

2014 Implication of ISO 17025 Calibration on Comparison Microscopes Webinar, Leica Microsystems and Forensic Magazine

Forensics@NIST 2014 Webinar: Ballistics/Toolmarks, National Institute of Standards and Technology Shooting Reconstruction: The Four Elements of Trajectory Webinar, Forensic Technology Center of Excellence and RTI International

Machinegun Conversions: Differentiating Between Deliberate Full-Auto Modifications and Unintentional Malfunctions Workshop, AFTE, Seattle, WA

Make and Shoot Black Powder Workshop, AFTE, Seattle, WA

Double-Casting Workshop, AFTE, Seattle, WA

Universal Latent Workstation (ULW) Software Training Program, FBI/CJIS, Concord, NH Sturm, Ruger & Co. Armorer School (LCP/LC9 pistol), Newport, NH

- Toolmark and Fracture Match Imaging Workshop, IAI, Providence, RI
   UV & IR Gunshot Residue Photography Workshop, IAI, Providence, RI
   What Makes a Credible Witness? Webinar, Forensic Bioscience Consultants and Forensic Magazine
- Application of Shape Measurement and Statistical Tools to Fingerprint and Footwear Evidence
   Webinar, Idaho State Police Forensic Services and the Midwest Forensic Resource Center
   Measurement Uncertainty in Firearms, ASCLD/LAB & Heusser Neweigh, Albany, NY
   Application of Spatial Statistics to Latent Print Identifications: A Geometric Morphometric Approach
   Webinar, Research Triangle Institute and National Institute of Justice
   Measurement Confidence for the Forensic Laboratory Webinar, ASCLD/LAB & Heusser Neweigh
- 2011 ASCLD/LAB-International (ISO) Accreditation Preparation Course, ASCLD/LAB, Burlington, MA Mass Disaster Drill at Pease International Tradeport, OCME Temporary Morgue Team, Portsmouth, NH
- 2010 Ethics in Forensic Science, NEDIAI & NEAFS Joint Educational Conference and Training Seminar, Manchester, VT

Presenting Information Visually, West Virginia University Forensic Science Initiative, Boston, MA Advantages of Digital Media, West Virginia University Forensic Science Initiative, Boston, MA Credibility is Believability: Success in the Courtroom Webinar, The Trial Experts and Forensic Magazine Contemporary Issues in Firearms Identification Workshop, AFTE, Henderson, NV Testifying as an Expert – Art or Science Workshop, AFTE, Henderson, NV Leica Microscopy and Imaging Workshop, Meriden, CT

2009 Lips, Elbows and Other Skin Impressions Workshop, NEDIAI, Freeport, ME Examination of Bodies for Fingerprints Workshop, IAI, Tampa, FL Fingerprint Examination and Fingerprint Statistics Workshop, IAI, Tampa, FL Statistics and Probabilities Workshop, IAI, Tampa, FL

- FBI Gunpowder and Gunshot Residue: Muzzle-to-Target Distance Determination road school Federal Bureau of Investigation, Springfield, MA
- 2008 Comparison of Plastic Garbage Bags Workshop, NEDIAI, Portsmouth, NH Advanced Shooting Incident Reconstruction, Police Standards & Training Council, Concord, NH Shooting Incident Reconstruction/Officer Involved Shooting Investigation, Police Standards & Training Council, Concord, NH

Trajectory Reconstruction and 3D Scanning Workshop, AFTE, Honolulu, HI

Examination and Comparison of Cartridges, Cartridge Cases, Shotshells and Fired Shotshells, Boston Police Department and Massachusetts State Police, Boston, MA

Introduction to Scanning Electron Microscopy and Energy Dispersive Spectroscopy (SEM-EDS), New Hampshire State Police Forensic Laboratory, Concord, NH

Basics of Crime Scene Documentation Webinar, Forensic Magazine

Fundamentals of Crime Scene Investigation and Evidence Collection, Ron Smith & Associates, Concord, NH

2007 Ultraviolet/Infrared Forensic Imaging Webinar, FujiFilm

Ethics in Forensic Science: Value Based Decision Making, NH State Police Forensic Lab, Concord NIJ Daubert Workshop, New England Society Crime Lab Directors, Concord, NH

Introduction to Saw and Toolmarks on Bone: A Class Characteristics Approach Workshop, AFTE, San Francisco, CA

Potential for Errors in Cartridge Case Identification, Boston Police Department and Massachusetts State Police, Boston, MA

2006 Daubert Admissibility Issues and Preparation for the Toolmark Examiner, Bureau of Alcohol, Tobacco, Firearms and Explosives, and New Jersey State Police Ballistics Unit, Hamilton, NJ

Analysis of Distortion in Latent Prints Workshop, IAI, Boston, MA

Development of Latent Prints on Tape Workshop, IAI, Boston, MA

Optimum Combination of Light Sources, Dye Blends and Filters Workshop, IAI, Boston, MA Casting with AccuTrans Workshop, IAI, Boston, MA

The Expert Witness: A Daubert Presentation for Firearms and Toolmark Examiners, Bureau of Alcohol, Tobacco, Firearms and Explosives, and NJ State Police Ballistics Unit, Hamilton, NJ

- Forensic Individualization of Images with Configural Processing, NEDIAI, Burlington, VT
   Using Lasers in Trajectory Reconstruction at the Crime Scene Workshop, IAI, Dallas, TX
   Forensic Comparisons of Photographs and Objects, IAI, Dallas, TX
   Ultraviolet Fluorescence Digital Photography Workshop, IAI, Dallas, TX
   Advanced Techniques for Photographing Shoeprints, Latent Fingerprints and Plastic Bag Extrusion
   Marks Workshop, IAI, Dallas, TX
- 2004 Physical Fracture Match Workshop, Document Consulting Service, Concord, NH Advanced Digital Imaging Techniques Workshop, IAI, St. Louis, MO Recovery of Fingerprint Evidence from Human Skin Workshop, IAI, St. Louis, MO Close-Up Imaging Workshop, IAI, St. Louis, MO SIG Sauer Law Enforcement Armorer Course (pistol), Epping, NH
- 2003 Fracture Match Techniques Workshop, NEDIAI, Manchester, NH Reconstruction of Shooting Crime Scenes Workshop, NEAFS, Pittsfield, MA Demystifying Palm Prints, Printrak Users' Conference, Denver, CO Glock Armorer Course, Saugus, MA

Integrated Ballistics Identification System (IBIS) school, Forensic Technologies and ATF, Largo, FL

- 2002 Sturm, Ruger & Co. Armorer School (pistol, revolver and rifle), Newport, NH
  Beretta In-Field Armorer Training Academy (pistol and shotgun), Stafford Springs, CT
  FBI Toolmark Examination Workshop, Boston Police Department, Boston, MA
  ATF Serial Number Restoration School, Rhode Island State Crime Laboratory, Kingston, RI
- 2001 Blood Detection Using Flora-Scene Workshop, NEDIAI, Plymouth, MA Analysis of Problem Latents, Forensic Identification Training Seminars, Thornton, CO Ridgeology Science Workshop, Forensic Identification Training Seminars, Thornton, CO Advanced Palm Print Identification, Massachusetts State Police Academy, New Braintree, MA Courtroom Testimony Techniques, Massachusetts State Police Academy, New Braintree, MA
- 2000 Collection and Preservation of Evidence, NH Police Standards and Training Council, Concord, NH Latent Recovery Techniques, New Hampshire Police Standards and Training Council, Concord, NH
- 1999 Fingerprint Classification, New Hampshire Police Standards and Training Council, Concord, NH
- Alternate Light Source Evidence Detection and Documentation Workshop, Connecticut State Identification Association, Groton, CT
   Blood Spatter Documentation, Collection and Interpretation Workshop, Connecticut State Identification Association, Groton, CT
- 1995 Crime Scene Workshop, NEAFS, Mystic, CT
   Testifying and Reporting Seminar, West Haven Police Department, West Haven, CT

#### **MEETINGS ATTENDED**

- 2019 26<sup>th</sup> Annual NEDIAI Education & Training Conference, Portland, ME 23<sup>rd</sup> Annual Northeast Area Firearms Examiner Training Seminar, Waterbury, VT 50<sup>th</sup> Annual AFTE Training Seminar, Nashville, TN
- 2018 25<sup>th</sup> Annual NEDIAI Education & Training Conference, Newport, RI 49<sup>th</sup> Annual AFTE Training Seminar, Charleston, WV
- 2017 24<sup>th</sup> Annual NEDIAI Education & Training Conference, Portsmouth, NH 21<sup>st</sup> Annual New England Area Firearms Examiners Meeting, Albany, NY 102<sup>nd</sup> Annual IAI International Educational Conference, Atlanta, GA
- 2016 23<sup>rd</sup> Annual NEDIAI Education & Training Conference, Dedham, MA 20<sup>th</sup> Annual New England Area Firearms Examiners Meeting, East Hartford, CT 47<sup>th</sup> Annual AFTE Training Seminar, New Orleans, LA
- 2015 19<sup>th</sup> Annual New England Area Firearms Examiners Meeting, Maynard, MA 100<sup>th</sup> Annual IAI International Educational Conference, Sacramento, CA
- 2014 18<sup>th</sup> Annual New England Area Firearms Examiners Meeting, East Hartford, CT 45<sup>th</sup> Annual AFTE Training Seminar, Seattle, WA
- 2013 39<sup>th</sup> NEAFS Annual Meeting, Cromwell, CT

	17 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, East Hartford, CT 98 <sup>th</sup> Annual IAI International Educational Conference, Providence, RI
2012	20 <sup>th</sup> Annual NEDIAI Education & Training Conference, Nashua, NH 16 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT Impression & Pattern Evidence Symposium 2012, Clearwater, FL
2011	15 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 42 <sup>nd</sup> Annual AFTE Training Seminar, Chicago, IL
2010	Inaugural NEDIAI & NEAFS Joint Educational Conference & Training Seminar, Manchester, VT 14 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT Summer 2010 Continuing Education for Forensic Professionals Program, West Virginia University Forensic Science Initiative, Boston, MA 41 <sup>st</sup> Annual AFTE Training Seminar, Henderson, NV
2009	17 <sup>th</sup> Annual NEDIAI Education & Training Conference, Freeport, ME 13 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Kingston, RI 94 <sup>th</sup> Annual IAI International Educational Conference, Tampa, FL
2008	16 <sup>th</sup> Annual NEDIAI Education & Training Conference, Portsmouth, NH 12 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 39 <sup>th</sup> Annual AFTE Training Seminar, Honolulu, HI
2007	15 <sup>th</sup> Annual NEDIAI Education & Training Conference, Newport, RI 11 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 38 <sup>th</sup> Annual AFTE Training Seminar, San Francisco, CA
2006	10 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 91 <sup>st</sup> Annual IAI International Educational Conference, Boston, MA 37 <sup>th</sup> Annual AFTE Training Seminar, Springfield, MA 2 <sup>nd</sup> Annual Human Identification E-Symposium, International Webinar
2005	14 <sup>th</sup> Annual NEDIAI Education & Training Conference, Burlington, VT 9 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 90 <sup>th</sup> Annual IAI International Educational Conference, Dallas, TX 3 <sup>rd</sup> Annual Northeast Latent Print Forum, Meriden, CT (co-moderator) Inaugural Human Identification E-Symposium, International Webinar
2004	13 <sup>th</sup> Annual NEDIAI Education & Training Conference, Portland, ME 8 <sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 89 <sup>th</sup> Annual IAI International Educational Conference, St. Louis, MO 2 <sup>nd</sup> Annual Northeast Latent Print Forum, Meriden, CT Tri-State Automated Fingerprint Identification System Users Meeting, Concord, NH
2003	New England Regional NIBIN Users Group Fall Meeting, Boston, MA New England Trace Examiners Fall Meeting, Concord, NH 12 <sup>th</sup> Annual NEDIAI Education & Training Conference, Manchester, NH 29 <sup>th</sup> NEAFS Annual Meeting, Pittsfield, MA New Hampshire LiveScan Users Group Fall Meeting, Concord, NH

7<sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT 24<sup>th</sup> Annual Printrak Users' Educational Conference, Denver, CO 1<sup>st</sup> Annual Northeast Latent Print Forum, Meriden, CT Tri-State Automated Fingerprint Identification System Users Meeting, Concord, NH 25<sup>th</sup> Annual National Shooting Sports Foundation SHOT Show, Orlando, FL New England Regional NIBIN Users Group Winter Meeting, Boston, MA

- 2002 6<sup>th</sup> Annual New England Area Firearms Examiners Conference, Meriden, CT New England Regional NIBIN Users Group Meeting, Sudbury, MA IAFIS User's Seminar, CJIS/FBI, Columbus, OH NEDIAI AFIS Subcommittee Meeting, Concord, NH
- 2001 10<sup>th</sup> Annual NEDIAI Education & Training Conference, Plymouth, MA 5<sup>th</sup> Annual New England Area Firearms Examiners Meeting, Meriden, CT Tri-State Automated Fingerprint Identification System Users Meeting, Concord, NH
- 2000 9<sup>th</sup> Annual NEDIAI Education & Training Conference, Burlington, VT Tri-State Automated Fingerprint Identification System Users Meeting, Concord, NH New England Commission on Forensic Education, Danvers, MA
- 1996 40<sup>th</sup> Annual Tri-State Identification Seminar, Connecticut State Identification Association, Groton, CT 5<sup>th</sup> Annual Arnold Markle Symposium, University of New Haven, Ledyard, CT
- 1995 4<sup>th</sup> Annual Arnold Markle Symposium, University of New Haven, West Haven, CT 21<sup>st</sup> NEAFS Annual Meeting, Mystic, CT

#### **FACTORY TOURS**

Newington, NH	2013
Westfield, MA	2012
Shelburne Falls, MA	2006
Accokeek, MD	2004
Exeter, NH	2004
Shelburne Falls, MA	2002
New Haven, CT	2002
Branford, CT	2002
Shelton, CT	2002
Cheshire, CT	2002
North Haven, CT	2002
North Haven, CT	2002
Newport, NH	2002
West Hartford, CT	2002
Hartford, CT	2002
Springfield, MA	2002
Stafford Springs, CT	2002
	Westfield, MA Shelburne Falls, MA Accokeek, MD Exeter, NH Shelburne Falls, MA New Haven, CT Branford, CT Shelton, CT Cheshire, CT North Haven, CT North Haven, CT Newport, NH West Hartford, CT Hartford, CT Springfield, MA

# MANAGEMENT TRAINING

NH Department of Safety, Concord, NH:	
LEAN White Belt webinar	2018
<ul> <li>Civilian Response to Active Shooter Events – DOS Homeland Security</li> </ul>	2016
<ul> <li>Frontline Supervisor Training Program – Part V (Knowledge Management)</li> </ul>	2016
<ul> <li>Frontline Supervisor Training Program – Part IV (Strategic Planning)</li> </ul>	2016
Frontline Supervisor Training Program – Part III	2015
Frontline Supervisor Training Program – Part II	2015
• Frontline Supervisor Training Program – Part I	2015
NH Bureau of Education & Training, Concord, NH:	
<ul> <li>Foundations of State Supervision</li> </ul>	2019
How to Leverage Yourself to Communicate Better	2015
Conflict Resolution	2015
<ul> <li>How to Communicate Effectively in the Midst of Tension</li> </ul>	2015
Miscellaneous:	
<ul> <li>Succession Planning: 5 Basic Steps webinar, CPS HR Consulting</li> </ul>	2018
<ul> <li>Forensic Leadership Series online, Forensic Technology Center of Excellence a American Society of Crime Laboratory Directors</li> </ul>	and 2018
<ul> <li>Quality and Technical Manager Level Overview of ASCDL ISO/IEC 17025:2017 webinar, American Association for Laboratory Accreditation</li> </ul>	2018
<ul> <li>Using Measurement to Hire Pattern Evidence Examiners Webinar, National Academy of Sciences</li> </ul>	2016
Tribal Judo TM: Accountability Beats Chaos Workshop, IAI	2015
<ul> <li>ISO/IEC 17025: Non-Conformances and Strategies to Prevent</li> </ul>	2015
Recurrence Workshop, IAI	
<ul> <li>ASCLD/LAB-International (ISO) Accreditation Preparation Course,</li> </ul>	2011
ASCLD/LAB, Burlington, MA	
<ul> <li>Transition to Leadership and Bridging Generational Gaps Workshop</li> </ul>	2010
West Virginia University Forensic Science Initiative, Boston, MA	