THE 46TH ANNUAL

AFTE

TRAINING SEMINAR

MAY 24-29, 2015 - THE FAIRMONT HOTEL - DALLAS, TEXAS

SEMINAR PROGRAM SPONSORED BY

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In Memoriam

AFTE Remembers . . .

Ralph Baney

Retired Civilian Ralph Baney, who retired from the Kansas City Missouri Police Department on December 22, 1999, passed away on December 15, 2013 after a lengthy illness.

Ralph was born December 24, 1943, in Gallion, OH, and was 69 years of age at the time of his death. He was appointed to the department on January 16, 1975 and was assigned to the Regional Crime Laboratory for his entire career. After retirement, Ralph continued as an independent examiner. Ralph was an active Distinguished Member of AFTE with membership number 74. He wrote articles and presented papers at the annual training conferences. He was a devoted husband, father, grandfather and friend.

Ralph is survived by his wife, Wanda of Apache Junction, AZ; daughter, Sherri Rice of Lawson, MO; son, Shawn Baney of Lawson, MO; five grandchildren and seven great-grandchildren.

William M. Sorrow

William ("Bill") Mack Sorrow was born July 12th, 1940 in Allen, Oklahoma. He died February 14, 2015 in Temple, Texas from complications of a serious fall.

Bill was a Firearms Examiner for the Texas Department of Public Safety retiring in 2002 after 20 years of service. During his years of service, he often used his background as an archeologist to help with his work on tools and toolmarks. He took joy in working toolmark cases, viewing them as challenges, much to the delight of his fellow examiners who were more than glad to let him work them.

One of the larger cases that Bill worked on was the Austin Yogurt Shop case, comparing over 200 suspect firearms to the evidence, and giving expert testimony in what is still considered an open case.

Bill was very friendly and outgoing, and was a proud Oklahoma Sooner graduate, which led to quite a few lengthy discussions in the office between him and his three Texas Longhorn co-workers, especially during football season. Far too many years the Sooners would win, and Bill would not let us forget it (till the next year).

Bill had a number of interests (outside of how the Sooners were doing), including wood carving (he carved numerous walking sticks and canes), folding dollars in the shape of hearts, rings, stars, boxes, frogs, and shirts, playing the banjo or mandolin, and raising dogs, which he considered part of his family.

Bill is survived by his dear wife Frances, and two companion dogs, Nelson and Gia.

John Willmer

John Willmer passed away on December 24th, 2014 after his battle with mucosal melanoma.

John was a dive team member with the Explosive Ordnance Disposal on the U.S.S. Enterprise for the U.S. Navy. He then went on to become a Sergeant at the Michigan State Police Department where he was a firearms expert and member of the bomb squad at the Bridgeport Laboratory. In 1997, John moved to Virginia and worked at the Virginia Department of Forensic Science Central Laboratory located in Richmond as a firearms examiner. "The Sarge", as he was affectionately known to his coworkers at the Virginia Department of Forensic Science, was both a mentor and friend for all who came in contact with him. His stories were always captivating and his laugh infectious.

John Willmer and his wife, Mary, were the proud parents of three sons and the grandparents of six grandkids.

Welcome to Dallas!

The AFTE 2015 Host Committee would like to welcome you all to the beautiful city of Dallas for the 46th Annual AFTE Training Seminar at the Fairmont Hotel. We hope you enjoy the workshop and tour options, the evening activities, as well as the technical session. We know that the week is quite full of AFTE related events, but we hope that you will make some time to explore the great city of Dallas.

The Fairmont Hotel is located in the Dallas Arts District and you are a short walk, trolley ride, or DART train ride away from food and entertainment. If you have a question about where to eat or what to do, please don't hesitate to ask one of our host committee members.

We hope y'all have a great week!

Host Committee

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Lannie Emanuel, Chair

Southwestern Institute of Forensic Sciences
Laura Fleming
April Kendrick
Heather T. Francis

Tarrant County Medical Examiner's Crime Laboratory
Charles Clow

Texas Department of Public Safety
Ron Crumley

Harris County Institute of Forensic Sciences
Jill Dupre

Integrated Forensic Laboratories, LLC
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Deion Christophe

Bexar County Criminal Investigation Laboratory
Ed Wallace

Oklahoma State Bureau of Investigation
Kate Crandell

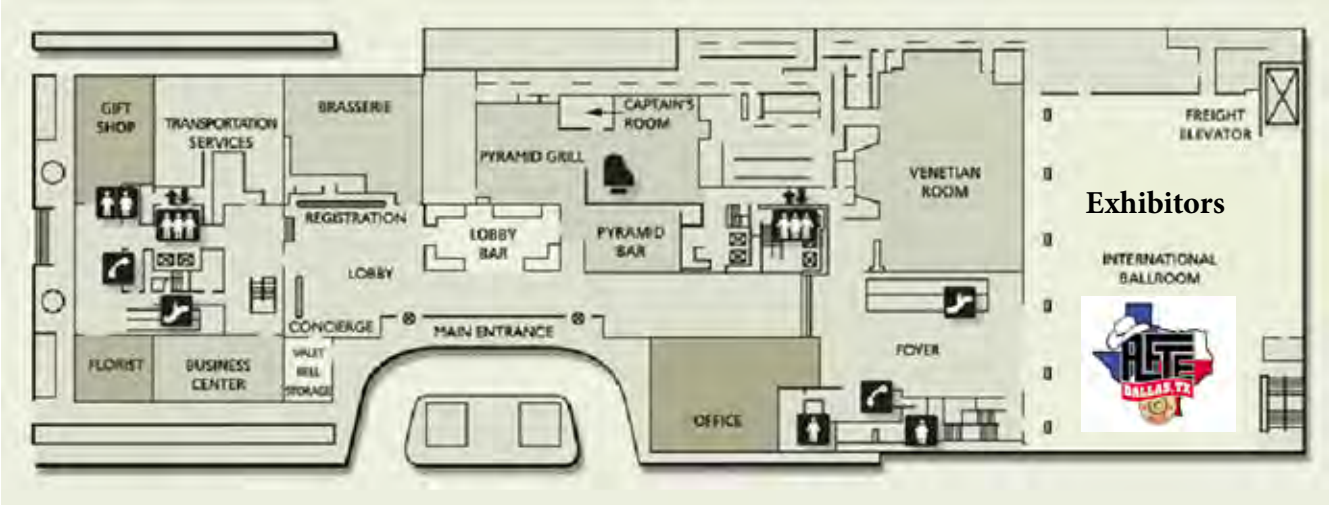
Washington State Patrol
Jori Farquharson

Prince George's County Police Department
Mike Coakley

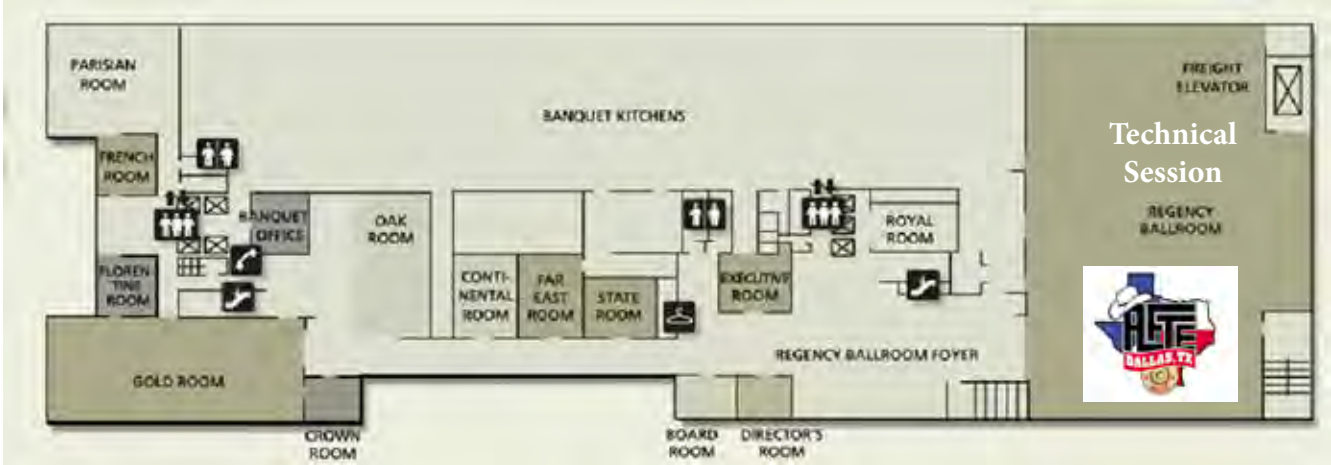
The Host Committee could not have made the seminar happen without our volunteers!

Victoria Clow - Janice Emanuel - Kathy Poole
B'Jay Kendrick - Travis Spinder - Kathy Geil - Rick Wyant
Kevin Callahan - Clayton Jeffress

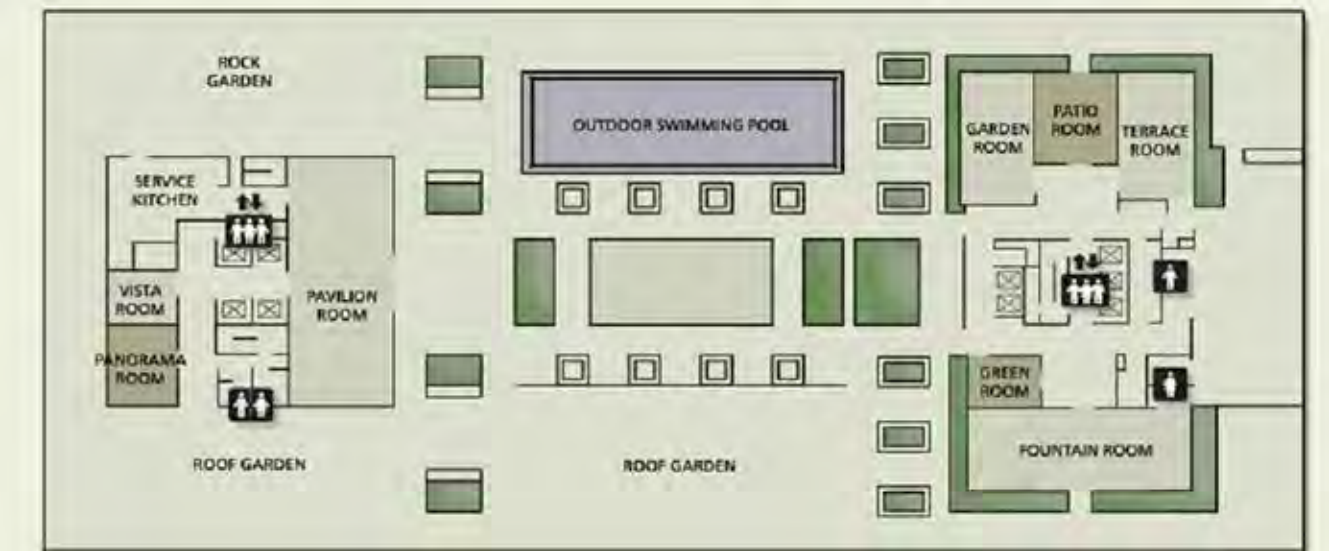
Fairmont Floor Plan



Lobby Level



Banquet Level



Terrace Level

Week at a Glance

Sunday, May 24th	AFTE Fun Run Workshops Registration Exhibitor Set Up G. Rathman Golf Outing Welcome Reception	10am 8am - 5pm 11am - 5pm 12pm - 5pm 1pm - 4pm 5pm - 7pm
Monday, May 25th	Registration Exhibitor Hours Technical Session Lunch Break Business Meeting Movie Night	7am - 5pm 7:30am - 5pm 8am - 12:15pm 12:15pm - 1:45pm 1:50pm - 4pm 7pm - 10pm
Tuesday, May 26th	Registration Exhibitor Hours Technical Session Armorer Course Lunch Break JFK Day Presentations Sixth Floor Museum Event NFEA Night	7am - 5pm 7:30am - 5pm 8am - 11:30am 8:30pm - 3:30pm 11:30am - 1pm 1pm - 5pm 6pm - 9pm 7pm - ?????
Wednesday, May 27th	Registration Exhibitor Hours Technical Session STI/Jesse James Tour Armorer Course Lunch Break Oswald/Tippet Tours Technical Session Poster Session Bring Your Own Slides	7am - 5pm 7:30am - 5pm 8am - 12pm 6:30am - 7pm 8am - 5pm 12pm - 1:30pm 1:15pm - 5:30pm 1:30pm - 5:20pm 7pm - 7:45pm 7:45pm - 9:30pm
Thursday, May 28th	Registration Exhibitor Hours Technical Session Armorers Courses Lunch Break Raffle Cocktail Hour AFTE Banquet	7am - 5pm 7:30am - 1pm 8am - 12pm 8am - 5pm 12pm - 1pm 1pm - 3pm 6pm - 7pm 7pm - 12am
Friday, May 29th	Workshops Tours	8am - 5pm 7:30am - 6pm

NOTE: LUNCHES WILL NOT BE COVERED BY THE HOST COMMITTEE OR SPONSORS

Accessing the Internet in the Conference Meeting Rooms

1) Select SSID **Fairmont_Meeting** from the wireless internet list on your device
2) After opening the web browser, you will get a splash page that prompts you for your **group name** and **access code**
3) Enter the **group name** and **access code** (case sensitive)
   - **Group Name**: AFTE2015
   - **Access Code**: misfire

The router will remember your device for up to 24-hours. You will have to re-login with same user name and password the following day. This login information for the wireless internet will only work in the meeting space.

Please call PSAV for internet assistance between the hours of 7am-7pm, Monday-Friday, at 214-720-5289, or extension 5289 from any Fairmont house phone. For assistance after hours, please call Fairmont's Internet provider, Superclick, at 888-240-3736.

IMPORTANT INFORMATION ABOUT CONTINUING EDUCATION UNITS (CEU) FOR RECERTIFICATION

The AFTE 2015 Technical Session includes 20 hours and 40 minutes of presentations. If you are attending a workshop or tour on Tuesday, Wednesday or Thursday and are not in attendance at the Technical Session you will need to subtract those hours from the total for documentation for Recertification.

Daily Hour Totals
Monday = 3 hours 35 minutes
Tuesday = 6 hours 35 minutes
Wednesday = 7 hours
Thursday = 3 hours and 30 minutes

Sunday May 24, 2015
Workshops/Events

Time	Workshop/Event
8am - 12pm	Projectile Deflection Caused by Intermediate Targets - Allesio/Noedel (Dallas PD Range - Meet in lobby at 7:30am)
8am - 12pm	CartWinPro Workshop (Continental Room)
8am - 12pm	"Ring of Fire" Workshop - Davis/Smelser (State Room)
8am - 5pm	Designing Practical Experiments: Concepts & Procedures using the JFK Assassination & Carcano Rifle Tests - Haag/Haag/Grissim (Dallas PD Range - Meet in lobby at 7:30am)
8am - 12pm	Expert Witness Testimony Techniques for Firearms Examiners in a Post Daubert/NAS Report and Current NCFS Environment - Ron Smith & Associates (Oak Room)
8am - 5pm	Gunshot & Shotgun Injuries - A Forensic Pathologist's Viewpoint - Besant-Matthews (Parisian Room)
8am - 5pm	Contemporary Issues in Firearms Identification Workshop - Nichols/Smith (Far East Room)

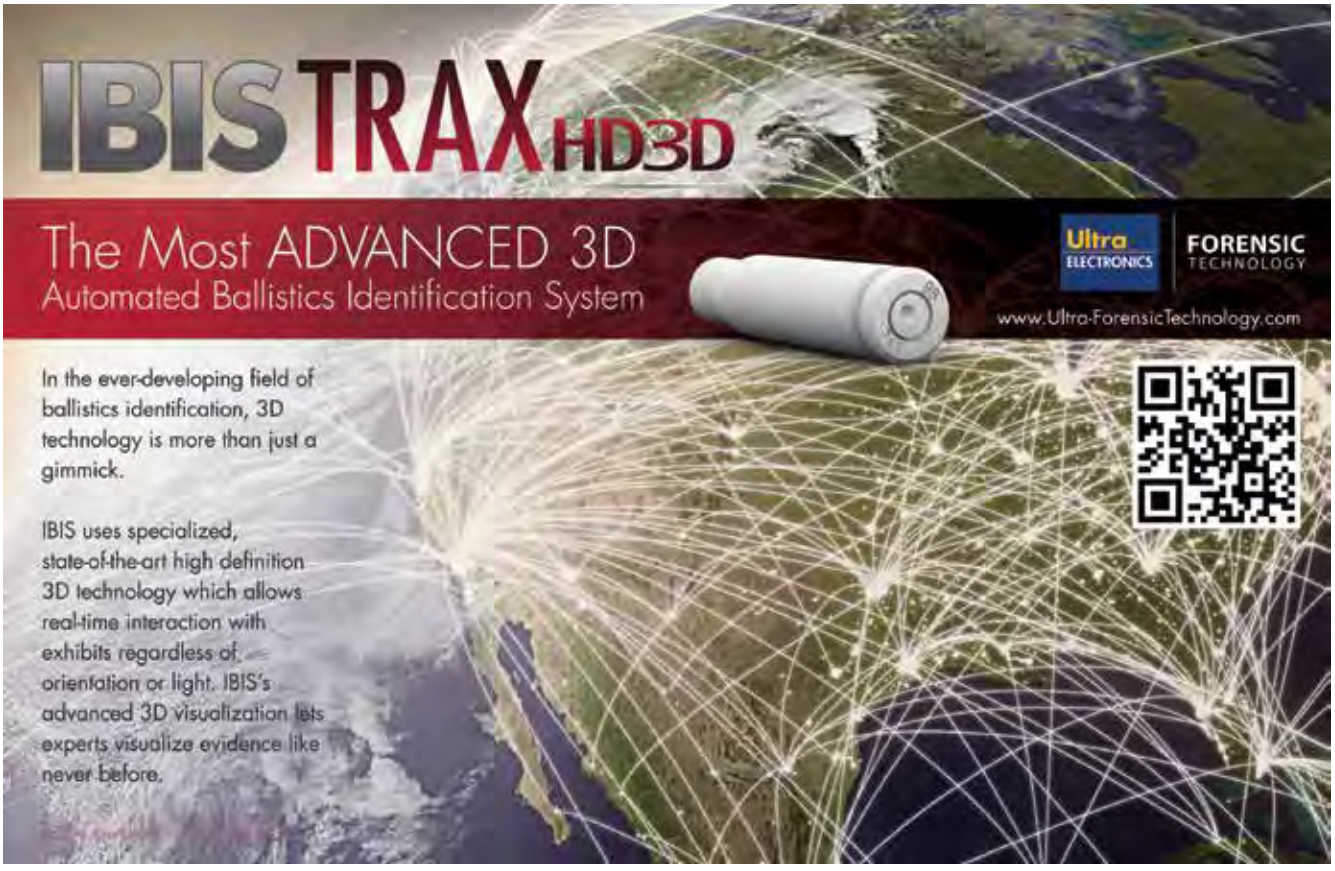
Sunday Schedule

Sunday May 24, 2015
Workshops/Events

Time	Workshop/Event
8am - 5pm	Tool/Toolmark Classification & Characterization Workshop - Klees (SWIFS - Meet in the lobby at 7:30am)
10am	AFTE Fun Run (Meet in the lobby at 10:00am)
11am - 5pm	Registration (Regency Foyer)
12pm - 5pm	Exhibitor Set Up (International Ballroom)
1pm - 4pm	Garry Rathman Memorial Golf Outing (Top Golf - Meet in the lobby at 12:45pm)
1pm - 5pm	Projectile Deflection Caused by Intermediate Targets - Allesio/Noedel (Dallas PD Range - Meet in the lobby at 12:30pm)
1pm - 5pm	Critical Decision Making - Demuth/Gunnell (Continental Room)
1pm - 5pm	Barrel Making Workshop - Offringa (Oak Room)
1pm - 5pm	Replication Workshop: ASTM E-1351 Acetate Tape Method - Schmidt (State Room)

Please join us on the Terrace Level in the Pavilion Room from 5pm to 7pm for the AFTE 2015 Welcome Reception Sponsored by

Ultra ELECTRONICS | FORENSIC TECHNOLOGY



Welcome Reception

Monday Schedule

Monday May 25, 2015
AM Technical Session
Regency Ballroom
Moderator: Charles Clow

Time Event/Presentation

8:00 **Color Guard - Dallas Police Department**
National Anthem - Reagan Miller
Booker T. Washington High School

8:10 **Welcome to AFTE 2015**
Fallen AFTE Members Memoriam
Recognition of:
AFTE Past Presidents
Dinosaurs/First Time Attendees
Countries Represented
Exhibitors/Sponsors
2015 Host Committee
Introduction of AFTE President

8:30 **Welcome from Kathy Richert, AFTE President**

8:40 **Keynote Speaker: Dr. James Hamby**

9:00 **AFTE 2016 Update**
Jeff Goudeau
Joni Adams & Cheryl Schreiner, Helms Briscoe

9:35 **AM Break Sponsored by:** CartWinPro I3 IDEAL INNOVATIONS INCORPORATED

10:05 **Door Prizes/Announcements**

10:10 **Serial Number Restoration on Titanium Firearms**
Cassie Schultheis *(Winner NFEA Best Paper)*

10:40 **Ammunition What's New & Don't Always Believe**
George Kass

Time Event/Presentation

11:00 **OSAC Updates**
Mark Keisler & Andy Smith

11:50 **The NIST Forensic Science Center of Excellence (FSCOE): Improved Understanding and Contextualizing of the Uncertainty Associated with Every Scientific Measurement or Analytical Technique**
Dr. Richard Cavanagh

12:15 **Lunch Break**

1:45 **Door Prizes/Announcements**

1:50 **AFTE Business Meeting**

6:30 **Transportation to Movie Night**
(Meet at Lobby)

7:00 **Movie Night at the Texas Theatre - Cold Case: JFK**
(See page 20 for details)

9:15 **Transportation from Movie Night**

Keynote Speaker: James Hamby, PhD

Dr. Hamby will be presenting historical information about AFTE.

Biography: Dr. James Hamby is an examiner with over 44 years experience and was initially trained at the US Army Crime Laboratory. Jim has worked in several laboratories and is a past-President of AFTE. This is Jim's 44th consecutive AFTE meeting attendance, beginning when he was only 15 years old.

Notes:

Jeff Goudeau
AFTE 2016 Update

Objectives: The 2016 AFTE training Seminar will be discussed. The meeting will be held at the New Orleans Hilton Riverside from May 28-June 4, 2016. Planned events, local attractions and other meeting information will be discussed.

Biography: AFTE 2016 Host Chair, Supervisor CSI and Firearms Louisiana State Police, NFEA Instructor, and NIBIN Users congress member.

Notes:

Cassie Schultheis

Serial Number Restoration on Titanium Firearms

Objectives: Although effective reagents and methods of application have already been established for serial number restoration on several types of metal, titanium has been relatively unexplored in forensic literature. Based on the increased use of titanium in modern firearms, it was the goal of this research to find a reagent that would successfully etch titanium to restore obliterated serial numbers.

Methodology: Eight room temperature and heated reagents were applied to titanium samples. The only reactive reagent was further tested on eleven heated titanium samples that contained markings with four different methods of application. Concentrated hydrochloric acid was applied to the heated titanium samples and allowed to remain on the metal for variable lengths of time.

Results: Markings on ten of the eleven heated titanium samples were fully or partially restored. Markings were unable to be restored on only one sample, which had the most amount of material removed during obliteration.

Biography: Cassie Schultheis holds a BS in Biological Sciences, a BA in Administration of Justice, and an MS in Forensic Science. She began her career in forensic science in 2011 as a Latent Print Examiner for the St. Louis Metropolitan Police Department. Cassie has been a Firearm & Toolmark Examiner at the Sedgwick County Regional Forensic Science Center in Wichita, KS since March 2013. She is a 2014 graduate of the ATF National Firearms Examiner Academy where she was recognized as having the best research presentation.

Notes:

George Kass
Ammunition What's New & Don't Always Believe

Objectives: New and unusual ammunition introduced and marketed circa 2014-2015. Don't always believe the headstamps and other information supplied by submitters.

Results: It is good practice to examine incoming evidence carefully and to double check what you believe to be obvious.

Biography: George Kass was originally made a Technical Advisor to AFTE in 1976. He then became a regular member and finally a distinguished member in later years.

Notes:

Mark Keisler & Andy Smith
OSAC Updates

Objectives: This presentation will provide information to the firearm and toolmark community relating to the newly formed Office of Scientific Area Committees. This organization was developed and is managed through the National Institute of Standards and Technology (NIST) as a response to the 2009 National Academy of Sciences report.

Mark Kiesler, Vice-Chair of the Forensic Science Standards Board (FSSB), will provide an introduction and update concerning this top layer of oversight of the OSAC Scientific Area Committees and general structure of the group.

Andy Smith, Chair of the Firearms/Toolmarks Subcommittee, will provide an update on the goals and progress of the subcommittee and anticipated timelines for current projects.

Biographies: Mark Kiesler is the Supervising Firearm/Toolmark Examiner for the Indiana State Police Forensic Laboratory system and is the immediate Past President of AFTE.

Andy Smith is the Supervising Criminalist for the San Francisco Police Department Crime Laboratory Firearm/Toolmark Unit and is a current board member of AFTE.

Notes:

Dr. Richard Cavanagh

The NIST Forensic Science Center of Excellence (FSCOE): Improved Understanding and Contextualizing of the Uncertainty Associated with Every Scientific Measurement or Analytical Technique

Objectives: The objectives of the FSCOE are: 1. Provide a strong scientific basis in probabilistic method and computation development; 2. Create education and training infrastructure in probabilistic methods for practitioners, non-practitioners and stakeholders, and; 3. Promote competence building among and dialogue between NIST, Academia, and the forensic science community.

Methodology: The FSCOE will accelerate the adoption methods and standards in the forensic sciences and will establish opportunities for extended collaborations between NIST, lead and partner institutions, forensic practitioners, and recipient scientists by employing mechanisms such as staff exchanges, jointly advised graduate students, post-doctoral researchers and senior guest scientists. Results: The selected FSCOE will be announced in 2015.

Biography: Dr. Richard Cavanagh is the Acting Associate Director for Laboratory Programs and assists the Acting Under Secretary for Standards and Technology in setting the direction of NIST. He provides direction and operational guidance for the scientific and technical mission-focused laboratory programs of NIST and he represents NIST and the laboratory programs to external audiences.

Notes:

Texas Theatre Event

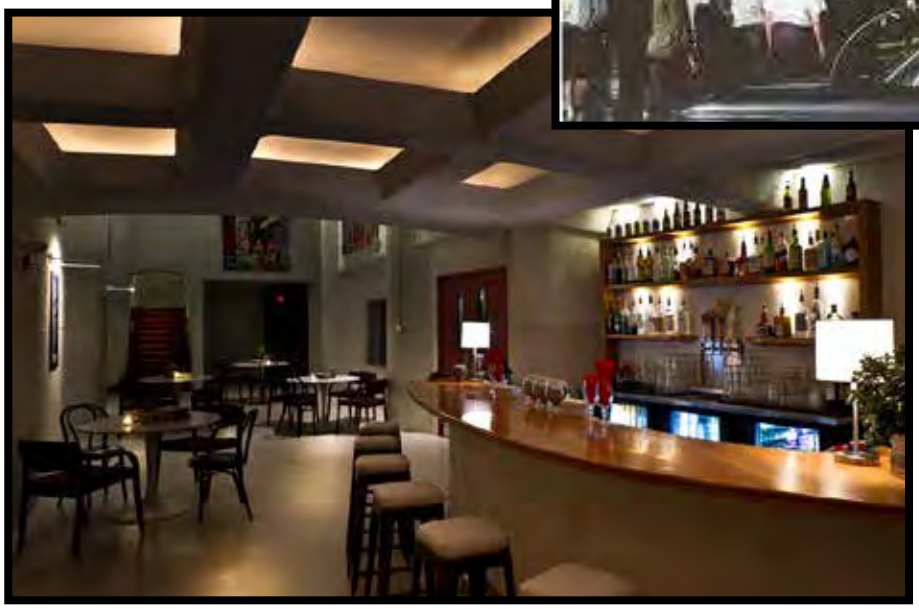
MOVIE NIGHT AT THE TEXAS THEATRE

Location: 231 W. Jefferson Blvd. Dallas, TX 75208
Date: Monday, May 25th
Time: 7 pm – 10 pm (showtime 8 pm)

The Texas Theatre is a movie theater and Dallas Landmark located in the Oak Cliff neighborhood of Dallas. It gained historical fame November 22, 1963, as the location of Lee Harvey Oswald's arrest for the Assassination of U.S. President John F. Kennedy and the killing of Dallas police officer J. D. Tippit.

This event will include a screening of the NOVA Special "Cold Case: JFK" featuring AFTE Members Luke and Mike Haag and AFTE Technical Advisor Tony Grissim.

- **Popcorn and a Cash Bar will be available**
- **Transportation to/from the Fairmont Hotel included**



Tuesday May 26, 2015
Armorer's Course

Time	Workshop
8:30am - 3:30pm	Smith & Wesson, M&P Pistol Armorer Course - Plaxco (Oak Room)

AM Technical Session
Regency Ballroom
Moderator: Deion Christophe

Time	Event/Presentation
8:00	**Door Prizes/Announcements**
8:05	**Examination of Reloading Marks** Nancy McCombs
8:40	**GunOps - Tracking Bad Boys Doing Bad Things** Rocky Edwards
9:15	**Homemade & Converted Weapons: General Survey & Evolution** Pavel Giverts
9:35	**Origin and Usage of the Slide Scuff Marks on Cartridge Cases** Jan Eckert
9:55	**AM Break Sponsored by:** 
10:20	**Door Prizes/Announcements**
10:25	**The Drill Bit & What's Left Behind** John O'Neil
10:55	**Selecting a Platform for the Philippine National Police Firearms Identification System** Reynaldo De Guzman
11:30	**Lunch Break**

Tuesday Schedule

PM Technical Session: JFK Day Presentations

Moderator: Charles Clow

Time Event/Presentation

1:00 **Door Prizes/Announcements**

1:05 **Secrets of a Homicide: The JFK Assassination Computer Animation in Crime Scene Reconstruction**
Dale Myers

3:05 **PM Break Sponsored by:** Ultra ELECTRONICS | FORENSIC TECHNOLOGY

3:35 **Door Prizes/Announcements**

3:40 **The Ballistic Evidence in the Assassination of John Fitzgerald Kennedy November 22, 1963 Dallas, TX**
Luke Haag

5:00 **End of Tuesday Technical Session**

6:00 **Sixth Floor Museum Event - 411 Elm Street**
(See page 30 for details)

7:00 **NFEA Night (see below)**

NFEA Night

There are so many people involved, in one way or another, with the National Firearms Examiner Academy that we have decided that the gathering needs to be all inclusive. So if you are a former student, instructor, know someone who attended the academy, or think you might have heard of it once . . . join us at the Press Box Grill for the:

Nostalgic **F**un **E**vening 4 **A**ll

7pm - ????

Press Box Grill

1623 Main Street

Nancy McCombs

Examination & Evaluation of Reloading Marks

Objectives: Recognizing reloaded ammunitions is an essential part of firearm and toolmark examination, evaluation, and comparison. Unfortunately, training in this area is lacking in the training plans of many laboratories.

Methodology: Commercial cartridges of various caliber and type were fired, resized, reloaded, and then refired. Toolmarks were examined at each stage to evaluate any changes.

Results: Often, many types of reloading marks were recognizable. More frequently, however, marks on fired and recycled commercial ammunition were indistinguishable from fired marks on resized and reloaded ammunition.

Biography: Nancy McCombs is a Distinguished Life Member of AFTE. She has received the AFTE Member of the Year and Steve Molnar Awards as well as FTI's Calvin Goddard Award. Nancy is AFTE certified in the areas of Firearm, Toolmark, and Gunshot Residue Evidence Examination and Identification. She has instructed numerous classes, most notably in the area of subclass characteristics.

Notes:

Rocky Edwards

GunOps: Tracking Bad Boys Doing Bad Things With Guns

Objectives: Introduction of "GunOps", a cost effective secure web-based software solution used to track firearm related incidents in a City, County or State. This presentation will: 1) describe how the program is being used to assist in proactive policing at Santa Ana Police Department and Stockton Police Department; 2) demonstrate the benefits on how it can be used by a firearms unit to visually track gun related crimes; and 3) describe how "GunOps" is a computerized dashboard designed to work with systems such as IBIS.

Methodology: This presentation will show how "GunOps" is essentially designed to act as a dashboard for IBIS. The examiner can see what is pending in caliber categories based on geographic locations as well as suspect and incident data. This is shown to help prioritize the examiner's workload. Other techniques utilized are expedited report writing processes, surveillance camera location information, and location of persons that have been field-interviewed by police. "GunOps" can also provide patrol officers the ability to see gun related crimes in their patrol areas from shift to shift, potentially benefitting officer safety.

Results: Strategic implementation of "GunOps" and other expedited processes by the Stockton Police Department and the Santa Ana Police Department has enabled these departments to efficiently tackle their backlog while identifying NIBIN hits, linking cases, and providing criminal intelligence that is valuable to investigators.

Biography: Rocky Edwards is a Distinguished Member of AFTE and is the Firearms Examiner for both the Santa Ana Police Department and Stockton Police Department. He was a Special Agent with the Criminal Investigation Division of the US Army and was trained in Firearms Identification by the US Army Criminal Investigation Laboratory located at Ft. Gillem, Georgia.

Notes:

Pavel Giverts
Homemade & Converted Weapons - General Survey & Evolution

Objectives: In our work, we come across different kinds of homemade and converted weapons from very primitive to very sophisticated ones. Usually the examination of them is different from the examination of a regular weapon. To make the examination procedure of different kinds of homemade weapons clearer, it is possible to divide this big group into subgroups according to their construction. In this presentation, the author will share experiences in examinations of this kind of evidence and show the evolution of these homemade guns.

Biography: Pavel Giverts has worked as firearms examiner for the Israel Police for the past 15 years. He has an engineering degree (M.Sc) in mechanical engineering from Ukrainian University and M.Sc degree in mechanical engineering from Ben-Gurion University in Israel.

Notes:

Dr. Jan Eckert
Origin and Usage of the Slide Scuff Mark on Cartridge Cases

Objectives: This presentation will give an overview of the slide scuff mark on cartridge cases, its origin and usage for examinations by taking the example of a German homicide case.

Biography: Dr. Jan Eckert has been a firearms examiner at the Bundeskriminalamt (BKA) in Wiesbaden / Germany since 2009. He studied Fine Mechanics at the University of Applied Sciences in Frankfurt a. M. and also obtained a Ph.D. in Business Management. Besides his casework, he is Technical Assessor (Quality Assurance) and is the head of the firearms identification unit.

Notes:

John O'Neil
The Drill Bit & What's Left Behind

Objectives: To provide the examiner with the means of excluding, including, and/or identifying a submitted drill bit.

Methodology: 1) Microscopic study of the tool marks created by a twist drill bit in the bottom of a drilled hole and on the chips left behind by the drilling process; 2) Twist drill bit sizes defined by the four systems used in the United States; 3) The color of twist drill bits and what they mean; 4) Variations in point angles and measuring it; 5) Standardized nomenclature of the twist drill bit.

Results: The examiner will have a better understanding of a twist drill bit and how to exclude, include and/or identify the submitted drill bit.

Biography: John O'Neil attended his first AFTE meeting in 1972 in Atlanta, Georgia and in 1977, achieved distinguished member status. He was a Firearm and Toolmark Examiner with the Metropolitan Police Department in Washington, DC for 16 years and the Senior Firearm and Toolmark Examiner with the National Laboratory Center at the ATF for 8 years. His combined work experience as a Firearm and Toolmark Examiner resulted in about 4500 cases requiring microscopic comparisons and 621 trials. John worked on the Research and Development Team for Forensic Technology from April of 1995 to 2005. In 2005, he retired from Forensic Technology and is currently working as an Independent Consultant.

Notes:

Reynaldo Guzman

Selecting a Platform for the Philippine National Police Firearms Identification System

Objectives: There are approximately 1,700,000 licensed firearms in the Philippines. This number is growing at the rate of 80,000 per year. The Philippine National Police (PNP) is building a Licensed Firearms Database in addition to its Crime Evidence Database. The presentation will detail the process the PNP undertook to identify the most appropriate automated firearms identification system (FIS) technology available in the market for the task.

Methodology: In 2007, the PNP Crime Laboratory was asked to draft what would later become the Terms of Reference for the procurement of its FIS. To ensure transparency and to level the playing field among all FIS providers, the specifications were expressed in terms of functional requirements that were determined after a comprehensive needs analysis. The needs analysis took into consideration all aspects of the projected database - manpower requirements, infrastructure, and technology - a process which took two years. Once the functional requirements were identified, all known FIS in the market at the time were evaluated against it using a pass/fail method.

Results: Evaluating against criteria that ranged from imaging technology, system robustness, and support infrastructure, the PNP eventually settled for the dominant system in the market.

Biography: Reynaldo De Guzman is a retired Police Superintendent and the former head of the Philippine National Police (PNP) Crime Lab Firearms Identification Division (FAID). He retired in 2012 after more than twenty-five years as a firearms examiner in the PNP. During his career, he conducted over 8,000 examinations and testified in over 4,000 cases. It was under the tenure of Superintendent De Guzman as FAID Chief that the PNP won the IACP Vollmer Award for Forensic Excellence in 2012.

Notes:

Dale Myers

Secrets of a Homicide: The JFK Assassination Computer Animation in Crime Scene Reconstruction

On November 22, 1963, President John F. Kennedy was shot and killed by a sniper in Dallas, Texas, in what is arguably the most photographed murder in history.

Over the past fifty years, much of the photographic evidence in the assassination of JFK has been subjected to analysis - both professional and amateur. At the top of the list is Abraham's Zapruder's 8mm home movie of the murder, perhaps the most scrutinized strip of celluloid on Earth.

Thirty years after the crime, a new level of clarity to the assassination story by extracting motion geometry from the Zapruder film and applying it to a three-dimensional computer model of the crime scene has been added. The result is a dimensional model of the actual event that can be viewed, analyzed, and re-photographed from any position or angle.

To be presented are the results of thirty-five year study of the case in a vivid, multi-media production, including a frame-by-frame look at the infamous Zapruder film, a virtual look at the shooting in Dealey Plaza from multiple vantage points, and definitive answers to the lingering questions surrounding the greatest crime of the 20th century:

- How many shots were fired?
- Did a single bullet hit both Kennedy and Governor Connally?
- Did a gunman fire the fatal shot from the grassy knoll?
- Was Lee Harvey Oswald a lone gunman?

Also examined is the only hard evidence that has ever been offered in support of a conspiracy – a Dallas police recording that drove the 1979 House Select Committee on Assassinations' (HSCA) acoustic panel to conclude that two men shot at Kennedy. Myers presents the results of his definitive, two-year forensic analysis of six amateur films of the assassination which effectively invalidates the HSCA's conclusion.

Finally, Myers explores forensic evidence in the shooting of Dallas Police Officer J.D. Tippit, whose forgotten murder forty-five minutes after the president's led to the arrest of Lee Harvey Oswald.

About the Presenter

Dale K. Myers is a thirty-eight year veteran of radio and television. Winner of numerous awards for his work in the broadcast industry, including four Emmy® awards for his computer animation work, Myers is a recognized expert on the JFK assassination.

Over the last two decades, he has served as an on-camera expert and technical consultant for numerous television networks including *ABC News*, the *BBC*, *PBS*, *The Discovery Channel*, and *The History Channel*.

He authored the critically acclaimed book, *With Malice: Lee Harvey Oswald and the Murder of Officer J.D. Tippit*, a definitive second-by-second account of the shooting of the Dallas patrolman – killed forty-five minutes after the assassination of President Kennedy – and the frantic manhunt that ended in Oswald's arrest.

A seasoned writer and public speaker, Myers has served as spokesman on many subjects ranging from video production techniques to the art of computer animation.

Luke Haag
The Ballistic Evidence in the Assassination of John Fitzgerald Kennedy November 22, 1963 Dallas, TX

It is claimed that there are well over 1000 presentations and descriptions of the November 22, 1963 assassination of John F. Kennedy in the form of books, articles, movies and television specials have appeared since this historic and horrific crime.

Only a disappointing few have been the result of the efforts of writers and researchers knowledgeable in the subjects of firearms identification, shooting scene reconstruction and the specific wound ballistic performance of the 6.5mm Carcano rifle and associated ammunition. Yet the JFK assassination was the ultimate exercise in these forensic specialties.

The myths, nonsensical and absurd “theories” regarding this crime need to be addressed, and where appropriate, disproved with demonstrable facts. Forensic experts in the relevant fields need to be familiar with the facts and physical evidence and should be prepared to step forward and respond to past and future claims. The AFTE membership represents the logical, relevant body of forensic experts for future technical inquiries, proposed research and evaluation of ‘new’ theories regarding the November 22, 1963 events in Dallas.

This presentation will equip the attendees with many of the facts regarding the assassination of President Kennedy, the near-fatal wounding of Texas Governor John Connally. It will conclude with a number of useful references and recommendations for further study of the events in Dallas on that terrible day in November of 1963.

About the Presenter

Lucien C. “Luke” Haag is a former Criminalist and Technical Director of the Phoenix Crime Laboratory [1965-1982] with over 49 years experience in the field of criminalistics and forensic firearm examinations.

Presently he is an independent forensic consultant with his own company, Forensic Science Services, Inc. in Carefree, Arizona.

Luke Haag has a Bachelor of Science degree in chemistry from the University of California at Berkeley with subsequent forensic training at California State University at Long Beach, Indiana University, Arizona State University, McCrone Research Institute, the FBI Laboratory and FBI Forensic Training Facility at Quantico, VA.

He is a Distinguished Member and past-president of AFTE, a Distinguished Member of the California Association of Criminalists, a member of the Southwest Association of Forensic Scientists, a Fellow in the American Academy of Forensic Sciences and a past board member of the International Wound Ballistics Association.

He has authored and presented over 200 scientific papers, most of which have dealt with various exterior and terminal ballistic properties, effects and behavior of projectiles and is the author of the book ***Shooting Incident Reconstruction*** available from Elsevier/Academic Press (2006) now out in its second, 2011 edition and co-authored by his younger son, Michael Haag.

His JFK project is the result of more than 3 years of research and testing with an exact replica of the 6.5mm Carcano rifle linked to Lee Harvey Oswald and the now rare Western Cartridge Company 6.5x52mm ammunition both of which were identified as having killed President Kennedy and seriously wounding Texas Governor John Connally. Some of this work was shown in the November 2013 PBS-NOVA program “Cold Case: JFK”. His 2015 AFTE presentation will cover the majority of the testing and results from this project.

Sixth Floor Museum

Sixth Floor Museum Event

Location: 411 Elm St. Dallas, TX 75208
Date: Tuesday, May 26th
Time: 6 pm – 9 pm (Come & Go)

The Museum is located on the sixth and seventh floors of an early 20th-century warehouse formerly known as the Texas School Book Depository - the location of Lee Harvey Oswald's sniper's nest on November 22, 1963. The permanent exhibit features films, photographs, and artifacts that chronicle President Kennedy's life, death, and legacy.

The event will include exclusive access to the Sixth Floor permanent exhibit and admittance to the seventh floor where light hors d'oeuvres and a cash bar will be available.

The Fairmont Hotel is about a 15 minute walk to the Sixth Floor Museum, less than a mile away. The museum is located in The West End neighborhood of Dallas where several restaurants and retail shops are located.

THE SIXTH FLOOR MUSEUM
AT DEALEY PLAZA

A BIG THANK YOU TO

TOM DEEB

OF
HI-POINT FIREARMS
FOR HIS CONTINUED SUPPORT
OF THE
FIRST-TIME ATTENDEE
PROGRAM!

Thank You Tom Deeb!

Wednesday Schedule

Wednesday May 27, 2015
Tours

Time	Workshop/Event
AM START	
7am - 7pm	**Firearms Manufacturing Tour to Austin, TX - STI International/ Jesse James Firearms (Meet in Lobby at 6:30am)**
8am - 5pm	**Springfield Armory Armorer Course - XD/XDM - Yates (Oak Room)**
PM START	
1:15pm - 3:15pm	**Oswald/Tippit Shooting Crime Scene Tour - Myers (Meet in Lobby at 1pm)**
3:30pm - 5:30pm	**Oswald/Tippit Shooting Crime Scene Tour - Myers (Meet in Lobby at 3:15pm)**

AM Technical Session
Regency Ballroom
Moderator: Michael Ward

Time	Event/Presentation
8:00	**Door Prizes/Announcements**
8:05	**Evaluation of Recent Daubert/Frye Challenges to Firearm & Tool Mark Identification** Dr. James Hamby
8:40	**Flight of Shotgun Slugs** Evan Thompson
9:15	**Subclass Characteristics in Recent Ruger Handguns** Steven Norris
9:50	**AM Break Sponsored by:** ESI
10:20	**Over the river and ....." The Gawda Long Distance Shooting Reconstruction** Rick Wyant, John Allgire, & Tony Grissim

Time Event/Presentation

11:25 **Inceptor by Polycase**
Angel Moses

12:00 **Lunch Break**

PM Technical Session

Moderator: Omar Felix

1:30 **Door Prizes/Announcements**

1:35 **Identification & Recognition of Fired Cartridge Cases from Multi-Caliber Firearms**
Adam Hartley

2:05 **NIST Ballistic Toolmark Database Phase 1 Report**
Alan Zheng

2:40 **The Empirical Evaluation & Examination of Breechfaces on Ten Consecutively Manufactured Pistol Slides**
Sascha Huang & Deion Christophe

3:30 **PM Break sponsored by:**

4:00 **Door Prizes/Announcemer**

4:05 **Increasing the Role of Statistics in Firearm & Toolmark Identification**
Tracy Morris, Deion Christophe, & Katelyn Crandell

4:50 **Are Class Characteristics Really Inconclusive? An Introduction to the World of the Bayesian Examiner**
Gerhard Wevers

5:20 **End Wednesday Technical Session**

7:00 - 7:45 **Poster Session (Regency Ballroom)**
(See page 42 for details)

7:45 - 9:30 **Bring Your Own Slides Event (BYOS) (Regency Ballroom)**
(See page 43 for details)

Dr. James Hamby
Evaluation of Recent Daubert/Frye Challenges to Firearm & Tool Mark Identification

Objectives: This presentation will: 1) Evaluate recent legal challenges to firearm and tool mark identification by various individuals; 2) Examine the common verbiage - and misuse of AFTE materials - used by individuals attempting to discredit our science; and 3) Provide the audience with information to counter the different challenges used by the defense bar. Methodology: Numerous transcripts and testimonies of defense 'examiners' from the SWGGUN 'ARK' were reviewed as was information found when searching the Web.

Conclusions: Challenges to the science of firearm /tool mark identification by defense examiners can be negated using materials found on the ARK. There is a wealth of research accomplished in the past 75 years - with several recent research projects reported on since 2000. Examiners facing Daubert / Frye challenges are encouraged to bolster their testimony by having another examiner testify to our science.

Biography: Dr. James Hamby is an examiner with over 44 years experience and was initially trained at the US Army Crime Laboratory. Jim has worked in several laboratories and is a past-President of AFTE. This is Jim's 44th consecutive AFTE meeting attendance, beginning when he was only 15 years old.

Notes:

Evan Thompson
Flight of Shotgun Slugs

Objectives: This presentation outlines research that was conducted to determine the maximum range for a number of common shotgun slugs using Doppler Radar from both smooth bore and rifled shotguns. Additionally, a case in which range was requested as well as the identification of the recovered evidence shotgun slug to the barrel of one of three suspect shotguns.

Methodology: Doppler Radar was used to track the maximum ranges for manufactures of six shotgun slugs: 2 3/4 inch Federal 1 ounce slug; Hornady 300 grain FTX slug; Ddupleks 500 grain steel slug; 2 3/4 inch Remington 1 ounce slug; 2 3/4 inch Winchester 1 ounce slug; and 2 3/4 inch Winchester PDX1 Defender 1 ounce slug with 3 plated 00 Buck pellets. Review of the identification of the recovered evidence shotgun slug in a shooting case as well as the identification of the plastic sabot recovered during testing.

Results: Doppler Radar calculated the minimum distance a shotgun slug will travel to 769 yards (703 meters) to a maximum distance the FTX slug (bullet) of 2257 yards (2064 meters). The recovered evidence shotgun slug was identified to the barrel of one of the three suspect shotguns as was the sabot to the test from the rifled shotgun barrel.

Biography: Evan Thompson has been a firearm examiner for over twenty-five years and lives and works in beautiful Flagstaff, Arizona. Elevation - 7,000 ft (2133 meters).

Notes:

Steven Norris
Subclass Characteristics in Recent Ruger Handguns

Objectives: This presentation will demonstrate a repeating pattern of predominate subclass characteristics observed in recently manufactured models of Ruger handguns, demonstrate subclass carryover observed in 10 consecutively manufactured Ruger LC9 barrels, and present a summary of manufacturing process.

Methodology: A collection of recent model Ruger pistols was obtained by the authors. These firearms were test-fired and the barrels cast. 10 consecutively manufactured barrels for the Ruger LC9 were also obtained. Each of these barrels was cast and test-fired. A blind test was created involving known and unknown fired bullets and attempted by two (2) trained examiners. The same blind test was acquired into a 3D imaging system and correlated. The manufacturing process was considered in order to identify the specific process responsible for creating the subclass markings in the finished product.

Results: Notable agreement was observed between casts and the fired bullets from recent model Ruger barrels and the 10 consecutively manufactured Ruger LC9 barrels, indicating the presence of subclass characteristics. Substantial subclass agreement was observed among all consecutively manufactured Ruger LC9 barrels in both casts and bullets. The two (2) trained examiners attempted to identify unknown bullets to known test-fires in a blind test and individualization was not possible using traditional comparison microscopy.

Biography: Steven Norris is the Supervisor of the Firearms Section of the Wyoming State Crime Laboratory in Cheyenne, Wyoming. He has 13 years experience as a Firearm and Toolmark Examiner.

Notes:

Rick Wyant, John Allgire, & Tony Grissim
"Over the river and ....." The Gawda Long Distance Shooting Reconstruction

Objectives: This presentation will highlight the challenges of reconstructing a long distance shooting fatality using traditional methods and emerging technology.

Methodology: A young woman was inadvertently killed in the backyard of her residence during a family barbecue from a rifle fired at a distance of approximately 800 yards. Once the bullet was identified to the firearm, attention focused on the nature of the bullet path. The mapping of the area consisted of traditional total station and LIDAR scanning combined with GPS integration and 3D photogrammetry with an unmanned aerial system. Empirical testing with doppler radar measurements was conducted to determine the trajectory envelope from a shot in the air versus one that ricocheted off of water. The data obtained was compared to wound information from autopsy to determine the velocity of the projectile at impact.

Results: Stunning accuracy can be obtained from very large crime scenes by combining modern mapping technologies. Doppler radar measurements predicted the path of the questioned bullet in the air and after water impact at low angles. Interpretation of the wound in the victim was consistent to a lower velocity, slightly downward bullet path.

Biographies: Rick Wyant is a distinguished member of AFTE and the supervisor of the Washington State Patrol Laboratory in Seattle. He has been a firearms examiner since 1995, he instructs at NFEA, and he served on SWGGUN.

John Allgire is a detective with the Whatcom County Sheriff's Office where he serves as a crime scene investigator and firearms instructor.

Tony Grissim is the Major Account Manager for the Leica Geosystems Public Safety Group and has provided his services to AFTE for many years.

Notes:

Angel Moses
Interceptor by Polycase

Objectives: The Inceptor ammunition is available with RNP and ARX bullet loads. A comparison of these bullets to FMJ and JHP will be completed in respect to velocities, performance, and microscopic value.

Methodology: The bullet profile and material composition was explored and addressed. Fortunately, the manufacturer was very forthright and accessible, even willing to provide some of their already completed tests. The testing included: Shooting into water to obtain samples for microscopic comparisons; obtaining velocities using a chronograph; and shooting into ballistic gelatin and other surface materials to obtain behavioral data.

Results: Inceptor ammunition is currently available in the commercial market and may soon be encountered in casework.

This bullet profile was also observed in a metal composition marketed by a different company. Having an understanding of the bullet characteristics is always a good thing.

Biography: Angel Moses has been an firearm and toolmark examiner for close to 17 years. She received her initial training with the Tennessee Bureau of Investigation where she worked for 4 ½ years. She moved and continued her career with the Las Vegas Metropolitan Police Department where she presently works and continues to broaden her horizons. She has participated on AFTE's Technical committee, Editorial committee and AFTE 2010 Host committee.

Notes:

Adam Hartley
Identification & Recognition of Cartridge Cases from Multi-Caliber Firearms

Objectives: This presentation aims to demonstrate methods of recognizing cartridge cases that have been fired by firearms that are capable of firing several cartridges of different caliber designations by examining obturation artifacts, chamber marks, and moon-clip marks.

Methodology: Three revolvers capable of firing different types of cartridges were used to produce exemplars: Smith & Wesson, Chiappa, and Ruger. The resulting fired cartridge cases were examined for toolmarks indicative of having been fired by a firearm designed for firing different ammunition types.

Results: The Smith & Wesson revolver produced chamber marks on the sides of 410 shotshells from the 45 Colt headspacing; the Chiappa revolver produced cartridge cases with obturation artifacts; the Ruger revolver produced no indications on the cartridge cases that is was fired by a revolver.

Biography: Adam Hartley has a Masters degree in Forensic Science from the University of New Haven and had received training in Firearms Examination by Jerry Petillo. Adam has been a microscopist and technical photographer for over 15 years.

Notes:

Alan Zheng
NIST Ballistic Toolmark Database Phase 1 Report

Objectives: The project objective is an open-access research database of bullet and cartridge case reference data consisting of traditional reflectance microscopy images and three-dimensional surface topography. The database will foster the development and validation of advanced algorithms, mathematical similarity criteria, and quantitative confidence limits for objective ballistics identification. The database will provide a foundation for a scientific knowledge base on the degree of similarity that can be found between marks made by different firearms and the variability of marks made by an individual firearm.

Methodology: The database project collected 1700 test fires from designed studies from around the US. The study sets focused on consecutively manufactured firearm components, persistence/decay, and ammunition effects. Land impressions of each bullet was measured using a 3D microscope. The firing pin impression and breech face marks of each cartridge case were measured using both a 3D microscope and a 2D bright field microscope.

Results: The framework is established and Phase 1 is complete. Of the collected test fires, over 850 have been measured. The ISO file format 'X3P' was chosen for all 3D topography measurements and the TIFF format was chosen for all 2D images. A website (http://www.nist.gov/forensics/ballisticsdb) was created to describe the database project as well as provide the public links to download the available data.

Biography: Xiaoyu Alan Zheng is a Mechanical Engineer in the Semiconductor & Dimensional Metrology Division of NIST. He has a B.S. and M.S. in Mechanical Engineering and focuses his research on objective measurements and analysis of 2D/3D ballistics toolmarks. He is currently a member of the Subcommittee on Firearms & Toolmarks in the NIST OSACs as well as a Technical Adviser for AFTE.

Notes:

Sascha Huang & Deion Christophe
The Empirical Evaluation & Examination of Breechfaces on Ten Consecutively Manufactured Pistol Slides

Objectives: Previously published research and case studies exist pertaining to consecutively manufactured tools and the individuality of the markings of those tools. This study sought to assess the AFTE Theory of Identification and provide additional research into the investigation of characteristics potentially viewed on the breechfaces of pistol slides.

Methodology: Ten consecutively manufactured Ruger LCP .380 Auto slides were obtained for examination. The tool marks exhibited on the breechfaces were macroscopically examined, evaluated in terms of potential for the transfer of subclass characteristics, and examined for the presence of individual characteristics. The importance of this study was in validating the AFTE Theory of Identification through the generation of a test for AFTE members. The test required examiners to distinguish between subclass and individual characteristics, identify cartridge cases to their respective slide, and determine whether there was potential for misidentification of breechface markings due to subclass carryover. This study also observed the ability of examiners and IBIS® BRASSTRAX-3D™ and Matchpoint+™ computerized imaging system in the evaluation of the breechface markings on ten consecutively manufactured Ruger LCP .380 pistol slides.

Results: The testing methodology approached in this study corroborates that trained examiners are able to distinguish between class, individual, and subclass characteristics. This study also indicates that trained examiners are able to take subclass characteristics into consideration and that carryover is not an obstacle that hinders them from drawing a correct conclusion. The second aspect of this study analyzed the ability of examiners and a three-dimensional imaging system to draw correct conclusions. The results demonstrate that imaging technology systems cannot adequately replace a trained examiner's ability, but by utilizing certain aspects, such as normalized scores, the potential exists for it to be best utilized as a tool working in conjunction with the examiner.

Biographies: Sascha Huang is currently an analyst with the Missouri State Patrol Crime Laboratory Division-Latent Print Unit. She received her Masters Degree from the W. Roger Webb Forensic Science Institute at the University of Central Oklahoma and as part of this degree requirement, she completed a masters thesis in the area of Firearm and Toolmark Analysis. She is here today to present on behalf of her results.

Deion Christophe has been involved with the University of Central Oklahoma since the spring of 2008, while employed with the Oklahoma City Police Department (OCPD) Crime Laboratory as a Firearm & Toolmark Examiner. He is a Regular member of AFTE and currently serves as the Impression Evidence Training Coordinator at the W. Roger Webb Forensic Science Institute at the University of Central Oklahoma.

Notes:

Dr. Tracy Morris, Deion Christophe, & Katelyn Crandell
Increasing the Role of Statistics in Firearm & Toolmark Identification

Objectives: The 2009 National Research Council Report, "Strengthening Forensic Science in the United States: A Path Forward", points out the deficiencies in many forensic science disciplines, including firearms and toolmarks, with respect to statistics. The Forensic Science Institute at UCO has partnered with faculty from the Department of Mathematics and Statistics at UCO to attempt to rectify, at least in some part, these deficiencies. To date, 8 projects have been completed or are in progress. In this talk, we will describe some of these projects and their outcomes.

Methodology: 8 graduate research projects related to firearm and toolmark analysis have been compiled and will be discussed with an overrearching outcome to support or refute the use of statistics with respect to their impact in the field of forensic science. 1) Deterioration of Various Cartridge Case Compositions in Selective Environments; 2) Practical Evidence Processing: Does Cyanoacrylate Fuming Hinder Firearms Analysis?; 3) Assessment of Consecutive Matching Striae; 4) Comparative Analysis of Techniques for Shooting Trajectory Reconstruction; 5) The Use of Image Analyzing Software for Muzzle to Target Distance Determination; 6) The Empirical Evaluation and Examination of Breechface Markings on Ten Consecutively Manufactured Pistol Slides; 7) Evaluation and Validation of IDenta Corporation's Bullet Hole Testing Kit (BTK); and 8) Understanding 3D Data Correlations: A Look at 2 Double Blind Studies Conducted on the EVOFINDER Network Based Digital Microscope.

Results: Statistical implications and scientific relevance of each project will be addressed based on each project.

Biographies: Dr. Tracy Morris is an Associate Professor in the Department of Mathematics and Statistics at the University of Central Oklahoma. She started at UCO in 2007 and has been collaborating on forensic science projects since 2010. She holds a PhD in Statistics from Oklahoma State University.

(See Deion Christophe's biography previous abstract.)

Katelyn Crandell is a firearm and toolmark examiner with the Oklahoma State Bureau of Investigation (OSBI). Prior to the OSBI, Ms. Crandell was employed by Harris County in Houston, Texas. She is an NFEA graduate and is currently pursuing her master's degree in forensic science from the W. Roger Webb Forensic Science Institute at the University of Central Oklahoma.

Notes:

Gerhard Wevers

Are Class Characteristics Really Inconclusive? An Introduction to the World of the Bayesian Examiner

Objectives: This presentation will introduce firearm and toolmark examiners to the interpretation of evidence using the framework of Bayes Theorem. Bayes Theorem and the use of likelihood ratios will be briefly discussed. A case example where only a correspondence of class characteristics was obtained will be presented to show that a correspondence of class characteristics can provide strong evidence.

Methodology: Using likelihood ratios, the "commonness" of a class characteristic is considered when interpreting a comparison of limited microscopic detail.

Conclusions: Using likelihood ratios it can be shown that not all class characteristics provide the same "inconclusive" evidence. Other features present will also provide more or less support for a proposition or hypothesis. If used correctly, contextual bias will be removed from intrepreting evidence.

Biography: Gerhard Wevers is a Senior Forensic Scientist at the Institute of Environmental Science and Research (ESR) Limited in New Zealand. He is one of three firearm examiners in New Zealand and his duties also include the analysis of trace evidence, toolmarks, ignitable liquids and substance identification. He has co-written a number of articles on Bayes Theorem and has given statistics workshops to firearm examiners in Australia and New Zealand.

Notes:

Poster Session

Poster Session Event

This year's formal Poster Session will be held on Wednesday evening in the Regency Ballroom from 7:00pm to 7:45pm.

The posters will be available for viewing ALL WEEK in the Regency Ballroom. This is to ensure that all attendees have an opportunity to view posters.

2016 AFTE Cruise Informational Gathering

Wednesday May 27th, 7pm to 9:30pm in the Oak Room

Tom Wyant will be presenting information on the 2016 AFTE Cruise that may be taking place after the training seminar in New Orleans.

Bring Your Own Slides Event

This year's Bring Your Own Slides Night (AKA Open "Mike" Night) will be moderated by Mike Haag.

The BYOS presentations session is a great opportunity to present an interesting case study. Presentations are limited to a specific 8 minute presentation time frame requirement with a 2 minute window to address questions or concerns about the previously presented information(10 minutes MAX).

Thursday Schedule

Thursday May 28, 2015
Armorer Courses

Time	Workshop/Event
AM START	
8am - 5pm	Ruger LCP & LC9 Armorer Course - Wood (Far East Room)
8am - 5pm	Glock Armorer Course - Evans (Oak Room)

Thursday May 28, 2015
AM Technical Session
Regency Ballroom
Moderator: Jamie Becker

Time	Event/Presentation
8:00	**Door Prizes/Announcements**
8:05	**How to Estimate the Likelihood Ratio (LR) in Firearm Evidence Identifications** John Song
8:40	**Gaussian-Binomial Approximation for Assigning Error Rate and Sensitivity to Breech Face Correlations Using CMC Method** Daniel Ott
9:10	**Recent Advancements on a Novel 3D-Topography Imaging & Analysis System for Firearm Identification** Ryan Lilien
9:45	**AM Break - Co-Sponsored by:**
10:15	**Door Prizes/Announcements**
10:20	**Isolated Pairs Research Study** Mark Keisler & Melissa Oberg
10:55	**Three Unusual Toolmark Cases Involving Pry Bars, Paint Chips, a Ruger Pistol, and Four Size 10 Wood Screws** Kurt Moline

Time Event/Presentation

11:30 **Digital and Virtual Preservation of the Bullet Artifacts in the President John F. Kennedy Assassination**
Robert Thompson, T. Brian Renegar, & Alan Zheng

12:00 **Lunch Break**

1:00 **Raffle**

3:00 **END OF DAY**

6:00 - 7:00 **Cocktail Hour (Regency Foyer)**

7:00 - 12:00 **AFTE Banquet (Regency Ballroom)**

John Song

How to Estimate the Likelihood Ratio (LR) in Firearm Evidence Identifications

Objectives: Firearm identification has more than 100 years history, however, the fundamental assumption of uniqueness and reproducibility of firearms-related toolmarks has been challenged by recent NRC reports. It is requested by recent court decisions "to report a small, but nonzero, error rate" for firearm identifications. It is a national priority in forensic science to establish a scientific foundation and a statistical procedure for quantitative error rate reports, by which the Likelihood Ratio (LR) and Coincidental Match Probability (CMP) can be estimated for supporting firearm identifications, thus emulating methods used for forensic identification of DNA evidences.

Methodology: Researchers at NIST have developed a Congruent Matching Cells (CMC) method for ballistics identifications and error rate reporting. The ballistics images to be correlated are divided into correlation cells and four identification parameters of the paired correlation cells are used for identifying whether the correlated image pair is from the same source, or a "Match." An error rate procedure based on the CMC method is also developed for the error rate report of ballistics identifications. Both the CMC method and the error rate procedure are supported here by analysis of a set of breech face images of 40 cartridge cases fired from handguns with 10 consecutively manufactured pistol slides.

Results: Based on the error rate procedure developed at NIST, a Likelihood Ratio (LR) can be estimated. For positive (identification) conclusions, the Likelihood Ratio LR1 can be estimated by the ratio of the true positive probability (TPP) to the false positive probability (FPP): LR1 = TPP / FPP. For negative (exclusion) conclusions, the Likelihood Ratio LR2 can be estimated by the ratio of the true negative (exclusion) probability (TNP) vs. the false negative probability (FNP): LR2 = TNP / FNP. These quantities can be calculated from the NIST error rate procedure, which can then be used to estimate the Likelihood Ratio (LR) and the Coincidental Match Probability (CMP) for Firearm Identifications.

Biography: John Song is a Project Leader for NIST's Forensic Topography and Surface Metrology Project; He is Post-Doc Research Advisor for the NIST/NRC Post-Doc program.

Notes:

Dr. Daniel Ott

Gausian-Binomial approximation for assigning error and sensitivity to breech face correlations using CMC method

Objectives: In the field of firearm identification, there is a fundamental challenge to report the error rate associated with cartridge case and bullet comparisons in order to prove the validity of such comparisons in court. Recent work at NIST has sought to address this challenge by developing a robust, automatic image and topographic identification algorithm called the Congruent Matching Cell (CMC) method. The objective is to establish a procedure for defining the robustness of a reported error rate that is derived from a particular experimental data set.

Methodology: Using the experimental results of comparisons of 40 cartridge cases fired from 10 consecutively manufactured pistol slides as an example, the limitations of using a binomial distribution to describe a mixed statistical population will be covered. This motivates the search for a better theoretical description of the measured results. The validity of using a Gaussian-Binomial approximation is discussed and demonstrated to be a more accurate representation of the measured results. Utilizing this new model and the established error rate procedure, an updated error rate is reported.

Results: Although the CMC method appears to fit the description of a Bernoulli trial, the statistical parameters of the subpopulations included in the overall sample set are shown to differ from each other. This same effect is expected to be even more pronounced in a practical ballistics database. Therefore, we demonstrate that a Gaussian–Binomial approximation, implemented by the method of moments, provides a more accurate theoretical fit of experimental data as defined by the root mean square error of the curve fitting residuals. Using this curve fit, a modified false negative error rate is presented which represents a more realistic and expected value. Finally, the sensitivity of this error rate is discussed based on Monte-Carlo simulations.

Biography: Daniel Ott is an NRC postdoctoral research associate at NIST working on advanced firearm identification techniques. He completed his doctorate in optics at the University of Central Florida in Orlando, researching volume Bragg gratings for high power laser systems. As a recent addition to the Surface and Nanostructure Metrology group at NIST, his research focus is on determining error rates in ballistics identification, assisting in the enhancement of the CMC method, and utilizing his experience in interferometry and holography to develop methods for correlating surface topographies and surface defect tests using comparative interferometry.

Notes:

Dr. Ryan Lilien

Recent Advancements on a Novel 3D-Topography Imaging & Analysis System for Firearm

Objectives: At the AFTE 2013 and 2014 meetings, we introduced a new, accurate, fast, and low-cost 3D imaging system, TopMatchGS-3D and presented preliminary scanning and matching results. Since the 2014 meeting, we improved our breech-face impression matching algorithm and created a new shear matching algorithm (for comparison of aperture shears). We added new visualization modes to highlight similar surface geometry between matched casings. We completed several large-scale casing matching studies. Finally, we've implemented a number of quality control checks which ensure the 3D measurement accuracy of the system.

Methodology: Our core analysis software provides database, visualization, and matching functionality. Since the 2014 meeting we have: 1) improved our breech-face impression matching algorithm, 2) developed and incorporated an aperture shear matching algorithm, 3) created a combined 0-1 score incorporating both breech-face impression and aperture shear, 4) created a novel heatmap visualization technique, 5) conducted several large-scale tests on over 300 unique firearms, 6) conducted a cross-modality matching experiment where casings scanned on our system can be compared with casings scanned on virtually any confocal microscope, and 7) implemented a quality control check which ensures 3D measurement accuracy. The casings in our datasets represent real-world evidence; that is, the firearms and casings were not selected on their ability to produce high-quality toolmarks. Many of the scanned casings have marked extremely poorly, which is representative of the types of evidence and test-fires seen in a real-world setting. This large real-world test set allows us to evaluate imaging and matching performance across a range of firearm and ammunition types.

Results: These real-world test sets provide insight into the performance of our matching algorithm. Our matching algorithm performs extremely well. Experienced firearms examiners know that poorly marked casings can be difficult if not impossible to match. We would not expect an automated imaging and analysis system to be able to match these casings, but we do expect that the system not provide a false-positive match for poorly marked casings. Every pair of casings with a match score above our significance threshold is correct. We achieve a zero false positive rate while being able to identify a correct match for approximately 80% of our real-world casings.

Biography: For over 20 years, Dr. Lilien's research has focused on the use of advanced computational methods to provide collaborating scientists informational leverage in solving their research problems. He earned an MD/Ph.D. from Dartmouth Medical School and Dartmouth's Department of Computer Science. Dr. Lilien is now located in Chicago and serves as Cadre Research Labs's full-time Chief Scientific Officer. He has published in the fields of Computer Science, Machine Learning, Image Analysis, Drug Discovery, Molecular Modeling, Protein Engineering, Search-and-Optimization, and Firearm Forensics.

Notes:

Mark Keisler & Melissa Oberg
Isolated Pairs Research Study

Objectives: Absent a firearm or any supporting information, can a firearm examiner reach a correct conclusion when comparing two unknown .40 S&W cartridge cases? Correct conclusions are defined as any answer which is not a false positive or a false negative. Inconclusives are not considered incorrect answers when the AFTE Theory of Identification is utilized.

Methodology: In an attempt to keep costs low, it was decided to use ammunition that was plentiful in the reference collection. For this reason CCI .40 S & W,180 grain Gold Dot was selected for this study. Next, nine .40 S & W pistols were selected from the Indiana State Police Firearms Reference Collection. These nine pistols were test fired and the cartridge cases were recovered and then evaluated for class and individual characteristics. 20 envelopes were assembled containing 2 cartridge cases each. These 20 envelopes then were considered a "kit". Kits were passed out and examiners were ask to compared the cartridge cases in the envelopes and arrive at a conclusion of Identification, Exclusion, or Inconclusive. The examiner was not asked to intercompare the envelopes.

Results: To-date, 93 examiners have completed the kits and there have been no wrong answers. These examiners represent all different levels of experience, using different equipment, and are from 4 different countries.

Biographies: Mark Keisler is the Unit Supervisor for the Indiana State Police Forensic Firearms Identification Unit. He is a Distinguished Member of AFTE, an AFTE Past President, and has authored 13 articles in both the AFTE Journal and the Journal of Forensic Science. He is an ASCLD-LAB assessor, a former member of SWGGUN, and currently sits as the Vic-Chair of the Forensic Science Standards Board.

Melissa Oberg has a bachelor of science in Chemistry and has worked for the Indiana State Police for over nine years with eight years being in the firearms unit. She is currently a distinguished member of AFTE, the AFTE treasurer, certified as a firearms examiner through AFTE, and is a Fellow through the American Board of Criminalistics.

Notes:

Kurt Moline

Three Unusual Toolmark Cases Involving Pry Bars, Paint Chips, a Ruger Pistol, & Four Size 10 Wood Screws

Objectives: These cases represent examples of the diversity of toolmark examinations, the importance of cooperation and coordination between scientists of different disciplines and the need for scientists to maintain their "situational awareness" when examining evidence.

Methodology: Case 1: Several pry bars and a door jamb were received for toolmark and trace evidence (paint) examinations. Large paint flakes, foreign to the scene and bearing toolmarks were recovered from the door jamb and compared to the tools. Case 2: During an officer involved shooting incident, the suspect's pistol was damaged from a bullet strike. While examining the firearms and firearm evidence, a small bullet fragment, unsuitable for comparative examinations, was found to have impressed toolmarks from the impact with a harder object. The fragment was subsequently compared to the finishing marks on the suspect's pistol. Case 3: A request was made to determine if wood screws found in a victim's tires and similar screws found in the suspect's residence could be linked. The items were initially submitted to the Trace Section, but after consultation on potential examinations, the case was transferred to the Firearm/Toolmark Section for an examination of the manufacturing marks.

Results: Case 1: The paint flakes had sufficient individual characteristics to identify them to the finishing marks (grind pattern) on the working surface of a pry bar. The toolmarks on the paint flakes were formed when the tool was painted/coated during manufacture. The paint solidified, essentially "casting" the tool surface. Case 2: The toolmarks on the bullet fragment were compared and identified to the marks on the slide of the suspect's pistol. Case 3: The screws were sorted into three groups by using gross characteristics in the Philips screw head recess. The heads were then cast for comparison and the four screws from the tires were identified as having been produced using the same tooling (header punch) as the suspect's screws. The significance of the conclusion needed to be determined and explained to our client. The typical lifespan of a Phillips header punch is 30,000 to 200,000 screws.

Biography: Kurt Moline has worked for the BCA Laboratory for 26 years spending the first 2 1/2 years in the Biology Section before transferring to the Firearm Section. He enjoys working cases and the (mostly) interesting challenge they offer.

Notes:

Robert Thompson, T.Brian Renegar, & Alan Zheng
Digital and Virtual Preservation of the Bullet Artifacts in the President John F. Kennedy Assassination

Objectives: The National Archives and Records Administration (NARA) is the nation's record keeper. One of their many responsibilities is preserving the records and artifacts that were part of President Kennedy's Assassination and its subsequent investigations. NIST has a long history of developing and producing the technology required to preserve priceless documents such as the Declaration of Independence, the Constitution and the Bill of Rights. It is this expertise that places NIST in a key position to assist NARA in preserving the bullet artifacts, also enabling easier access to the public. Officials at NARA contacted NIST to preserve the JFK bullet artifacts in a permanent digital/virtual form so that future requests for the artifacts can be provided in a more accessible form. The presentation will be divided into 1) Preliminary investigations and logistics 2) Photography of the artifacts 3) confocal and focus variation surface topography acquisitions and virtual rendering of the results.

Methodology: High resolution analog and digital photo macrographs were taken of the bullet artifacts, and 3D surface acquisitions using two methods of surface topographic measurements.

Results: These digital media will serve as optical and digital/virtual preservation for many generations to come.

Biography: Robert Thompson is a Senior Forensic Science Research Manager with the Special Programs Office-Forensic Science Programs at NIST for over 6 years. He has over 36 years of experience as a Forensic Scientist and Criminalist. He is certified in Criminalistics by the American Board of Criminalistics (ABC) and is a past Chairman and current member – Association of Firearm and Toolmark Examiners (AFTE) Certification Program Committee. He is a Fellow of the American Academy of Forensic Sciences and a Distinguished Member of AFTE.

T.Brian Renegar is a Physical Science Technician in the Surface and Nanostructure Metrology Group of the Semiconductor and Dimensional Metrology Division of NIST. He performs measurements and calibrations in the fields of surface metrology and ballistic identifications. He currently serves as Vice Chair of the American Society of Mechanical Engineers B46 Committee on the Classification and Designation of Surface Qualities.

(See Wednesday Abstracts for Alan Zheng's biography.)

Notes:

Friday Schedule

Friday May 29, 2015
Workshops/Events

Time	Workshop/Event
AM START	
8am - 5:30pm	Manufacturing Tour to Shilen Barrel & Bond Arms Road Captain Ron Crumley (Meet in the Lobby at 7:30am)
8am - 5:30pm	Body Farm Tour to Sam Houston State University Road Captain Kevin Callahan (Meet in the Lobby at 7:45am)
7:30am - 6pm	Body Farm Tour to Texas State University Road Captain Kathy Geil (Meet in the Lobby at 7:15am)
8am - 5pm	Metallurgy for the Non-Metallurgist - Medlin (Continental Room)
8am - 12pm	Blunt & Sharp Injury Analyzed - A Forensic Pathologist's View - Besant-Matthews (Oak Room)
8am - 12pm	Machineguns & Machinegun Conversions - Kingery (Parisian Room)
8am - 12pm	Ammunition Workshop - Kass (Far East Room)
9am - 12pm	Serial Number Restoration & Bar Code Deciphering Hopkins/Marsanopoli/Wells (State Room)
PM START	
1pm - 5pm	Contextual Bias & Context Management - Mattijssen (Oak Room)
1pm - 5pm	The Silencer in Court for the Expert Witness - Kingery (Parisian Room)
1pm - 4pm	Hi-Point Firearms Familiarization/Armorer's Course Deeb (Far East Room)
1:30pm - 3:30pm	Doublecasting - Murphy (State Room)

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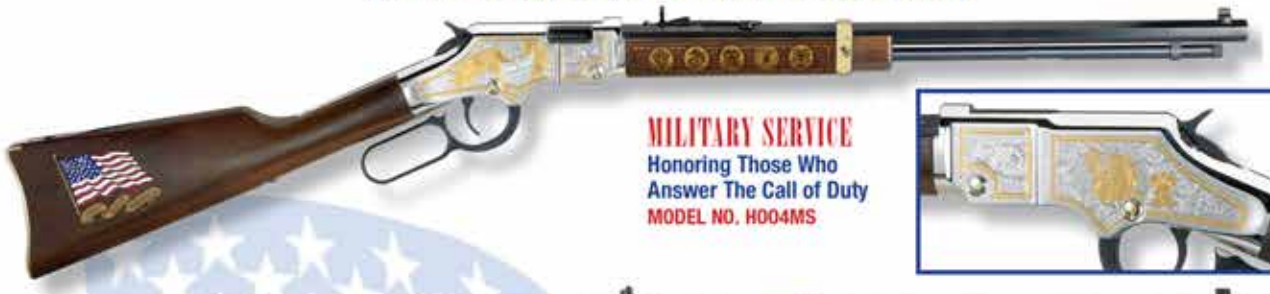

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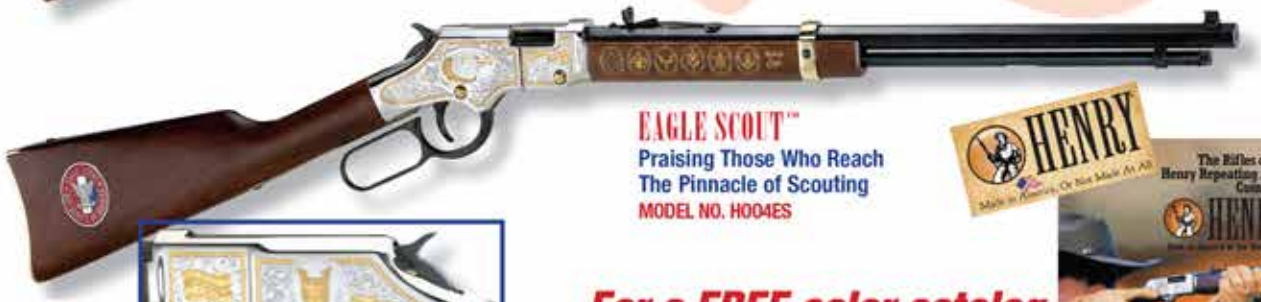

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AR .308

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B: For DPMS LR-308
G: For DPMS Gen 2

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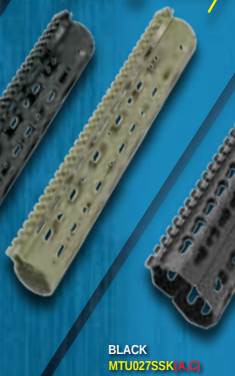
PICATINNY



COMPATIBILITY KEY

A: For Armalite AR-10
B: For DPMS LR-308
C: For S&W MP10 or Low Profile DPMS

BLACK MTU020SSK(A,B,C) | FLAT DARK EARTH MTU020SSKD(A,B,C)

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BLACK MTU027SSK(A,C) | FLAT DARK EARTH MTU027SSKD(A,C)

AK-47

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922R COMPLIANT

COMPATIBILITY KEY

A: For Romanian Type AK-47's
C: For Chinese Type AK-47's

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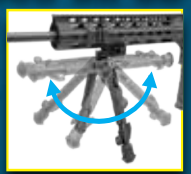

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Sunday Workshops

Sunday May 24, 2015

Projectile Deflection Caused by Intermediate Targets

Instructors: Dan Alessio & Matt Noedel

Class Size: Limit 20

Course Cost: $35

AM Class: 4 hours (8am-12pm) **STATUS:** FULL
PM Class: 4 hours (1pm-5pm) **STATUS:** FULL

Location: Dallas PD Range

This 4 hour course will examine the influence of intermediate barriers to bullet paths and study deflection after perforating an intermediate target. Variables will include different materials (such as glass, drywall, wood, bone, and tissue simulant), different calibers, differing velocity and projectile design. An introductory classroom lecture will be followed by live fire demonstrations on the range. Participants are encouraged to bring eye and ear protection along with a camera to document the results of the tests conducted. Travel to/from the Dallas PD Range will be arranged by AFTE.

Meet in the Fairmont Lobby at 7:30 am (AM Class) and 12:30pm (PM Class) for bus ride to Dallas Police Department's Range. A Dallas PD Range consent form will need to be filled out and notarized prior to leaving the hotel.

Course cost includes transportation to Dallas PD range.

PARTICIPANTS MUST HAVE NOTORIZED WAIVER TO ATTEND

Designing Practical Experiments: Concepts and Procedures using the JFK Assassination and Carcano Rifle Tests

Instructors: Luke Haag & Mike Haag with Tony Grissim

Class Size: Limit 40

Course Cost: $70

8 hours (8am-5pm) **STATUS:** OPEN

Location: Dallas PD Range

Classroom Lecture includes important elements of case-related empirical testing.

Formulating a hypothesis based on an issue or observations in a case.

Selection of appropriate materials (firearms, ammunition, targets, recovery media, documentation, instrumentation, etc.)

Experimental design

True research (velocity loss in tissue) vs. a demonstration of a principle (momentum transfer)

Anticipate your critics (write your own cross-examination)

Sharing with colleagues (a form of peer review)

Presentation/Publication

Examples of Selected Ballistic Issues in the JFK Assassination

The capabilities of the M91/38 Carcano rifle (operation/accuracy/muzzle velocity)

The exterior ballistics of the 160-gr. WCC Carcano bullet (muzzle velocity, downrange velocity at specific distances, ToF for these distances, drop, bullet path for selected zeroed ranges).

The wound ballistics of the 160-gr. WCC Carcano bullet (suitable tissue and bone simulants re: the “magic bullet”)

Demonstrations of the unusual stability and penetration behavior of the 160-gr. WCC Carcano bullet (wood, gelatin, ballistic soap)

Explanation of the very different behavior of this bullet in JFK’s two gunshot wounds,

The missing bullet from the 1st shot: possible deflection by the traffic light back plate (Max Holland’s 1st hypothesis),the traffic light support beam (Max Holland’s 2nd hypothesis), branches of the Southern Live Oak, a total miss and shot into the asphalt of Elm Street (Why no surviving evidence?), Testing these hypotheses- appropriate experimental designs

Explaining James Tague’s injury

Evaluating popular conspiracy theories and alternate explanations of the assassination

Examples of the value of the 3D laser scanning data (Mike H): Angles, distances, spatial relationships, Holland’s hypotheses, Grassy knoll shooters, etc.

Preparing for the future: new equipment, new techniques, new ideas

Practical Demonstrations - Dallas Police Department Range (Follows the classroom session)

Meet in the Fairmont Lobby at 7:30 am for bus ride to Dallas Police Department’s Range. A Dallas PD Range consent form will need to be filled out and notarized prior to leaving the hotel.

Course cost includes transportation to Dallas PD range and lunch.

PARTICIPANTS MUST HAVE NOTORIZED WAIVER TO ATTEND

Tool/Toolmark Classification & Characterization

Instructors: Greg Klees

Class Size: Limit 12

Course Cost: $35

8 Hours (8am-5pm) **STATUS:** **OPEN**

Location: Southwestern Institute of Forensic Sciences

Introductory training for the new trainee that discusses basic tool physics, types and working actions. Course also illustrates how these tool design features enable examiners to better classify and characterize toolmarks in order to include or exclude possible tool candidates for further comparison with questioned evidence.

Course also includes individual and group practical exercises to reinforce lecture information.

Course cost includes transportation to the Southwestern Institute of Forensic Sciences

Expert Witness Testimony Techniques for Firearms Examiners in a Post Daubert/NAS Report and Current NCFS Environment

Instructor: Ron Smith

Class Size: Limit 60

Course Cost: $35

4 Hours (8am-12pm) **STATUS:** OPEN

Location: Oak Room

Contrary to the public's perception, the majority of crime laboratories and forensic units do not have a formal and comprehensive expert witness testimony training program. This leaves the newly trained firearms examiner in the precarious position of learning to testify by attending the "School of Hard Knocks". Compound this lack of standardized training with the challenges to the forensic sciences since the "Daubert" decision and the NAS report and the courtroom environment becomes a potential mine field for the unprepared expert witness.

Add to that the upcoming recommendations of the National Commission on Forensic Science regarding terms to be used or not used in testimony and we find ourselves in the position to rethink how we testify and how we teach our trainees to succeed on the witness stand.

This four hour workshop will focus on one basic premise, and that is: Jurors do not vote on the truth! They can only vote on their perception of the truth as they see it that day in court. It certainly is not our job as expert witnesses to convict, but it is incumbent upon us to testify in a manner which is believable and understandable, regardless of the verdict.

It is up to you, as an unbiased forensic expert witness, to instill within them what is termed "forensic trust". Trust of the forensic discipline you practice and trust in you as the practitioner. This workshop is designed to teach the student the methodology necessary to foster that level of trust, regardless of the challenges presented by legal counsel. This workshop is a fun, interactive and highly energetic. Those faint of heart need not attend!

Contemporary Issues in Firearms Identification Workshop

Instructors: Ron Nichols, & Andy Smith,

Class Size: Limit 40

Course Cost: $50

8 hours (8am-5pm) **STATUS:** OPEN

Location: Far East Room

This workshop is designed to give the attendee an overview of the most contemporary issues facing the firearm and tool mark examiner community. Not all issues will be discussed, only the ones that are most frequently brought up in court proceedings and in the literature. The workshop will be constructed in a lecture and question / answer format. The attendees will receive instruction and materials on four (4) different contemporary issues. During each of the four separate lectures class participation and discussions periods will be integral to the success and knowledge gained from the workshop.

Gunshot & Shotgun Injuries - A Forensic Pathologist's View

Instructor: Patrick E. Besant-Matthews, MD

Class Size: Limit 65

Course Cost: $70

8 hours (8am-5pm) **STATUS:** OPEN

Location: Parisian Room

This presentation will start with basics for those members of AFTE who are fairly early in their careers as examiners, especially those who may be attending autopsies on firearms fatalities, performed by pathologists who lack sufficient knowledge of firearms. It will include common causes of misunderstanding and adverse publicity, false beliefs, common errors, how to explain range of fire in a simple way to a jury, and the concept of missile-tissue interactions (terminal ballistics), including wound profiles. There will be a section on wound documentation, including a practical form, tips for selecting landmarks, accurate measuring, a few useful aids and an example of an autopsy report in which the descriptions caused a good scene reconstructionist to come up with faulty estimates of angles and/or distances. There will also be a method of sorting out complex reports (due to multiple bullets), in which each surface feature, caused by an entering or exiting bullet, was given a number, and then the various wounds inter-related as the autopsy progressed. Such cases often leave people wondering where a wound was located, or if one or more were insufficiently described or related. Shotguns will follow, and probably run out the clock.

Electronic reference files will be provided if you bring your own USB flash drive.

CartWinPro Workshop

Instructors: Axel Manthei

Class Size: Limit 40

Course Cost: $35

4 Hours (8am-12pm) **STATUS:** OPEN

Location: Continental Room

A common task for the firearm examiner is to identify the origin of a cartridge by the

headstamp. A headstamp can be more than just the usual letters and numbers. It can contain abbreviations in foreign languages and Arabic numbers as well as symbols. But beyond this the arrangement of the information on the headstamp might be of importance. Special or meaningful codes may also be hidden on the headstamp amongst the more obvious information.

There are many caliber designations, and the difference in measurements can differ only by fractions of an inch. The determination of the correct caliber is, in many cases, easy by reading the headstamp. However, in some cases, even with readable information on the case head, it can be a difficult task. Demonstration will show how CartWinPro is applied in these cases.

Color codes will be discussed as an important means to describe the nature of the cartridge, and they may also be of importance in determining if the cartridge should not be fired in a particular type of range. Coding is usually standardized within a country or an organization but may have a completely different meaning if it is from another source. Color codes are not only encountered on the bullet itself, but also in other locations such as the primer annulus, headstamp, or case mouth. Combinations of these codes may also be used to designate the type of cartridge.

With only a bullet from the crime scene, identifying the caliber and cartridge can be a difficult task. Measurement, documentation, and entry of a few parameters in CartWinPro can narrow down the possibilities to a small number, and might also point out some not so obvious ones.

In this workshop we will try to sharpen the eye for hidden details of cartridges and how one can identify them using CartWinPro.

Barrel Making

Instructors: Allan Offringa

Class Size: Limit 40

Course Cost: $35

4 Hours (1pm-5pm) **STATUS:** OPEN

Location: Oak Room

This workshop will cover the processes used to make barrels from start to finish.

Critical Decision Making

Instructors: Bill Demuth & Dan Gunnell

Class Size: Limit 40

Course Cost: $35

4 Hours (1pm-5pm) **STATUS:** OPEN

Location: Continental Room

According to Rosenthal's "Coping With Crisis", a crisis is characterized by three elements: threat, urgency, and uncertainty. The ability to make correct and timely decisions during a

crisis is critical, particularly for the forensic science leader. Poor crisis decision-making, or the absence of decisions, can potentially produce results that are highly undesirable. The decision-making process is further complicated by various sources of uncertainty, questionable information, compressed time frames, environmental distractions, and potential non-deterministic outcomes. This dynamic workshop is designed to provide professionals within the Forensic Science community a heightened awareness of the Critical Decision Making Process and thereby contribute to their ability to not only function, but excel in the current forensic environment.

"Ring of Fire" Workshop

Instructors: Glenn Davis & Brian Smelser

Class Size: limit 24

Course Cost: $35

4 Hours (8am-12pm) **STATUS:** FULL

Location: State Room

This half day course will cover the history and firearms of the so-called "Ring of Fire" manufacturers such as Jennings, Bryco, Davis, Lorcin, Phoenix, Raven, Sundance, Sedco, Cobra, and Jimenez Arms. Students will be provided with an armorer's manual, as well as information on the various versions, functionality issues, and modifications observed in casework.

Replication Workshop: ASTM E-1351 Acetate Tape Method

Instructor: Frederick Schmidt

Class Size: limit 25

Course Cost: $35

4 Hours (1pm-5pm) **STATUS:** OPEN

Location: State Room

A four hour tutorial on the use, application and practice of making quality Acetate Replicas for future examination and evaluation to solve forensic evidence problems:

Field Metallography, Corrosion Products Sampling, Wear Debris Harvesting, Topographical Evaluations and Profilometry. Fracture & Fractographic Analyses, Failure Mode e.g. fatigue/ cleavage/hydrogen effect evidence.

A review of Non Destructive Testing Methods will be followed by the actual making of your own replica tapes, and specific examples of case history problem solving using ASTM E-1351 Methods in the field.

Tuesday May 26, 2015

Smith & Wesson, M & P Pistol Armorer Course

Instructor: J. Michael Plaxco

Class Size: Limit 13

Course Cost: $70

7 hours (8:30am-3:30pm) **STATUS:** FULL

Location: Oak Room

This course is designed for agencies carrying or authorizing for carry the Smith & Wesson M&P Pistol. Focus will be on nomenclature, field stripping and maintenance, safeties and safety checks, detailed disassembly, troubleshooting and minor repairs. Performing lessons repeatedly will insure good hands-on instruction for a better understanding of this firearm. Safety glasses will be provided. Bring your reading glasses if you have them.

Note: Only US Citizens are eligible for this workshop

Wednesday May 27, 2015

Tour for Oswald/Tippit Shooting Crime Scene

Instructor: Dale Myers

Class Size: 35

Course Cost: $25

(Early PM) 2 Hours (1:15 pm - 3:15 pm) **STATUS:** FULL

(Late PM) 2 Hours (3:30 - 5:30) **STATUS:** FULL

Location: Early PM Tour meet in the Hotel lobby at 1:00 pm. Late PM Tour meet in the lobby at 3:15 pm.

The bus tour hosted by author Dale K. Myers (With Malice: Lee Harvey Oswald and the Murder of Officer J.D. Tippit, 2013) will follow Oswald's route after his flight from the Texas School Book Depository and feature:

The Greyhound bus station where Oswald caught a cab to Oak Cliff

Oswald's rooming house at 1026 N. Beckley, Oak Cliff, where he retrieved his revolver

The Tippit shooting scene and Historic Marker

The Texas Theater, where Oswald was arrested

Firearms Manufacturing Tour to Austin, TX – STI International and Jesse James Firearms

Road Captain: Ron Crumley

Class Size: Limit 34

Course Cost: $100

12 ½ hours (6:30 am-7:00 pm) **STATUS:** FULL

Location: Meet in the Hotel lobby at 6:30 am

Tour the manufacturing facilities of STI International in Georgetown, Texas, and Jesse James Firearms in Dripping Springs, Texas.

STI International is a maker of Semi-Custom pistols.

Jesse James makes 1911's and AR-15 rifles.

We will meet in the Hotel lobby at 6:30 am and depart by 7:00 am. We will travel to STI in Georgetown, Texas first. After touring the STI facility, we will board the bus and travel to the Jesse James Firearms facility in Dripping Springs, Texas before returning to Dallas. Course cost includes charter bus transportation to manufacturing facilities, as well as lunch and snacks.

Itinerary

6:30 am Meet in the Hotel lobby

7:00 am Depart Fairmont-Dallas

8:30 am Rest Stop - Slovacek's in West, Texas

10:30 am Tour STI International

12:30 pm Depart STI for Jesse James Firearms, Dripping Springs, Texas

1:30 pm Arrive and tour Jesse James Firearms

3:00 pm Depart and return to Dallas

7:00 pm Arrive at Fairmont-Dallas

Springfield Armory Armorer Course - XD/XDM

Instructor: Fred Yates, Team One Network

Class Size: Limit 20

Course Cost: $150

8 hours (8am-5pm) **STATUS:** OPEN

Location: Oak Room

Springfield Armory Armorer courses are structured to provide each student with a practical understanding of the advanced features that make the Springfield Family of Firearms unique.

Students will gain hands-on experience with the XD Pistols, the safest polymer handgun available, bringing together a number of important safety innovations into one firearm.

Topics covered: Nomenclature, operator use, cycle of operation, field & detail stripping, care & cleaning, troubleshooting, and preventative & corrective maintenance.

Safety glasses will be provided. Bring your reading glasses if you have them.

Note: Only US Citizens or permanent green card holders are eligible for this workshop

Thursday May 28, 2015

Ruger LCP & LC9 Armorer Course

Instructor: Bob Wood

Class Size: Limit 20

Course Cost: $70

8 hours (8:00am-5:00pm) **STATUS:** FULL

Location: TBD

This one day training course will familiarize the student with the LCP and LC9 pistol. The course will cover an introduction, model variations, nomenclature, field and complete disassembly, inspections, trouble shooting and function/cycle of operation. This is a hands on training course. All weapons, tools and training materials will be provided. Writing utensil and safety glasses are recommended.

Note: Only US Citizens are eligible for this workshop.

Glock Armorer Course

Instructor: Joe Evans

Class Size: Limit 35

Course Cost: $125

8 hours (8:00am-5:00pm) **STATUS:** FULL

Location: Oak Room

One day (8 hour) class on how to maintain and service all handgun models. This class requires 100% attendance by the student. To successfully complete the class, the student must pass a written test with a minimum score of 80% and perform all practical tests as required. Practical tests consist of assembly/disassembly of the pistol.

Graduates receive certification as an armorer for 3 years and upon expiration of the certificate, they must recertify by attending the updated class again.

All necessary equipment is furnished by GLOCK including a pistol, tools, manuals, promo items, tests, pen and paper. A powerpoint presentation and "hands-on" learning environment.

Note: Only US Citizens are eligible for this workshop

Friday May 29, 2015

Serial Number Restoration and Barcode Deciphering

Instructors: Sheila Hopkins, Jodi Marsanopoli, & Major Wells

Class Size: Limit 20

Course Cost: $35

3 hours (9am-12pm) **STATUS:** OPEN

Location: State Room

The Bureau of Alcohol, Tobacco, Firearms and Explosives will present a 3 hour workshop on the restoration of obliterated serial numbers using the method of magnetic particle inspection (Magnaflux). The workshop will include lecture, demonstration and hands on practical exercises.

This workshop will also review the manual decryption process of partially obliterated barcodes and provide the method of interpreting the barcode characters.

Registrants should bring a labcoat and protective eyewear will be provided.

Doublecasting

Instructor: Paul Murphy, FTI

Class Size: Limit 20

Course Cost: Free

2 hours (1:30pm-3:30pm) **STATUS:** OPEN

Location: State Room

Demonstration of techniques on how to make microscopic quality resin replicas of fired bullets and cartridge cases. The purpose of double casting is to make replicas in order to exchange ballistic information across the country/state/international borders without sending the original evidence/test fires. The technique is also used in Europe (ENFSI) to generate proficiency tests.

Blunt & Sharp Injury Analyzed – A Forensic Pathologist's View

Instructor: Patrick E. Besant-Matthews, MD.

Class Size: Limit 35

Course Cost: $35

3 hours (8am-11am) **STATUS:** OPEN

Location: Oak Room

Gunshot wounds are a rapid form of blunt injury, so some of the terms and features of blunt injuries apply to, and are used in connection with, bullet wounds. It's a part of so many criminal and civil cases that almost anyone working with mechanical violence, needs a solid base of understanding to use and to build on. Participants will be shown the best system for examining and teaching the four main types of blunt injury (scrapes, bruises, tears, fractures) and the two main types of sharp injury (cuts, stabs).

Electronic reference files will be provided if you bring your own USB flash drive.

Contextual Bias & Context Management

Instructor: Erwin Mattijssen

Class Size: Limit 40

Course Cost: $35 **STATUS:** OPEN

4 hours (1pm-5pm)

Location: Oak Room

This 3 hour workshop will:

- Give an overview of cognitive bias within the forensic domain in combination with judgments which are subjective in nature

- Provide information on the question, if context management is truly needed

- Provide a classification system for the different types of contextual bias with Forensic Firearms examples

- Give an example of an implemented context management system within the field of Forensic Firearms Examination

Machineguns and Machinegun Conversions

Instructor: Max M. Kingery

Class Size: Limit 40

Course Cost: $35

4 hours (8am-12pm) **STATUS:** OPEN

Location: Parisian Room

Classroom lecture and demonstration (non-firing) of common machinegun conversions. The

class will explore the definition of “machinegun” under Federal Law and how to recognize the physical features and signs of a number of machinegun conversions and how these conversions work.

The Silencer in Court for the Expert Witness

Instructor: Max M. Kingery

Class Size: Limit 40

Course Cost: $35

4 hours (1pm-5pm) **STATUS:** OPEN

Location: Parisian Room

Classroom lecture and demonstration (non-firing) of silencer classification and testing. The class will explore the definition of “silencer” under Federal Law, a basic understanding of how silencers work, current testing procedures and courtroom issues when testifying about silencers. We will also touch upon some current industry and criminal trends and their implications to classification.

Ammunition Workshop

Instructor: George Kass, Forensic Ammunition Services

Class Size: Limit 40

Course Cost: $35

4 hours (8am-12pm) **STATUS:** OPEN

Location: Far East Room

This course will cover the development of the cartridge, headstamps, reference material, bullets, color codes, reference collections, etc.

Hi-Point Armorer’s Course

Instructor: Tom Deeb

Class Size: Limit 40

Course Cost: $35

3 hours (1pm-4pm) **STATUS:** FULL

Location: Far East Room

This course will discuss the Hi-Point product line as well as assembly / disassembly, serial number system and the manufacturing processes utilized by the company. There will be a hands-on portion of the course using actual Hi-Point firearms.

Metallurgy for the Non-Metallurgist

Instructor: Dr. Dana Medlin, Ph.D.

Class Size: Limit 40

Course Cost: $70

8 hours (8am-5pm) **STATUS:** OPEN

Location: Continental Room

This course will cover the general aspects of metallurgy with specific application to firearms and ammunitions. Some of the general topics that will be covered include:

A brief history of metals from the first development of metals for use as weapons thousands of years ago to the modern era will be given.

A basic explanation of the distinctive physical and mechanical properties that make metals exceptional materials for firearm and ammunition applications.

A comprehensive review of the national and international alloy designation systems used to identify metals.

A general overview of basic physical metallurgy theory and applying these theories to appropriate alloy manufacturing and heat treatment methods.

Explain how metals are formed into engineering components with specific reference to firearms and ammunitions.

Heat treatment terminology, methods and best practices for firearm components.

A basic overview of physical and mechanical test methods to determine critical properties of metals, as well as a discussion concerning typical standard test methods.

Explain the basis for the selection process of different alloys for specific applications.

Review the fundamentals of metal corrosion, corrosive environments, why different metals respond differently to corrosion, and controlling/minimizing corrosion damage.

Explain typical metal surface finishing techniques for firearms, the processes involved and the performance attributes.

Manufacturing Tour to Shilen Barrel and Bond Arms

Road Captain: Ron Crumley

Class Size: 34

Course Cost: $100

10 hours (7:30 am-5:30 pm) **STATUS:** FULL

Location: Meet in the Hotel lobby at 7:30 am

Tour the manufacturing facilities of Bond Arms in Granbury, Texas and Shilen Rifles in Ennis, Texas.

Bond Arms produces derringers.

Shilen Rifles produces rifles, barrels, and triggers.

We will meet in the hotel lobby at 7:30 am and depart by 8:00 am. We will travel to Bond Arms in Granbury, Texas first. After touring the Bond Arms facility, we will board the bus and travel to the Shilen Rifles manufacturing facility in Ennis, Texas before returning to Dallas. Course cost includes charter bus transportation to manufacturing facilities, as well as lunch and snacks.

Itinerary

7:30 am Meet in the Hotel lobby

8:00 am Depart Fairmont-Dallas

9:30 am Tour Bond Arms in Granbury

11:30 am Depart for Shilen Rifles

1:00 pm Tour Shilen Rifles in Ennis

4:30 pm Depart and return to Dallas

5:30 pm Arrive at Fairmont-Dallas

Body Farm Tour to Sam Houston State University

Road Captain: Kevin Callahan

Class Size: Limit 24

Course Cost: $100

8 hours (8am-estimated return 5pm) **STATUS:** FULL

Location: Meet in Lobby at 7:45am

Southeast Texas Applied Forensic Science Facility (STAFS) with Dr. Bytheway.

STAFS is a state-of-the-art research, education, and training facility designed to advance academic and technical knowledge in the application of forensic science disciplines to crime scenes and criminal activities. STAFS' predominant focus of study is the application of forensic sciences to the human body and the vast amount of evidence that can be gleaned from the careful recognition, collection, and preservation of that evidence. You can also visit their website at http://www.shsu.edu/~stafs/

Requirements: Will need to wear long pants, closed toed shoes, and a shirt with sleeves. Other PPEs will be provided, if needed. Participants will be asked to sign a liability waiver and a confidentiality statement waiver upon arrival at STAFS.

Course cost includes charter bus transportation to facility, as well as lunch and snacks.

Body Farm Tour to Texas State University

Road Captain: Kathy Geil

Class Size: Limit 24

Course Cost: $100

9 ½ hours (7:30am- estimated return 6pm) **STATUS:** OPEN

Location: Meet in Lobby at 7:15am

The Forensic Anthropology Center at Texas State (FACTS) with Dr. Wescott.

FACTS is a multifaceted forensic anthropological research, teaching, and outreach center within the Department of Anthropology. FACTS encompasses a body donation program, the outdoor Forensic Anthropology Research Facility (FARF) on Freeman Ranch, the Osteological Research and Processing Laboratory (ORPL), within the Freeman Ranch Multi-Purpose Facility, and the Grady Early Forensic Anthropology Research Laboratory (GEFARL). FACTS faculty and students conduct forensic anthropology research in human decomposition processes, the postmortem interval, human skeletal variation, and forensic osteological methods. You can also visit their website at http://www.txstate.edu/anthropology/facts/aboutus.html

Requirements: Will need to wear long pants, closed toed shoes, and a shirt with sleeves. Other PPEs will be provided, if needed.

Course cost includes charter bus transportation to facility, as well as lunch and snacks.

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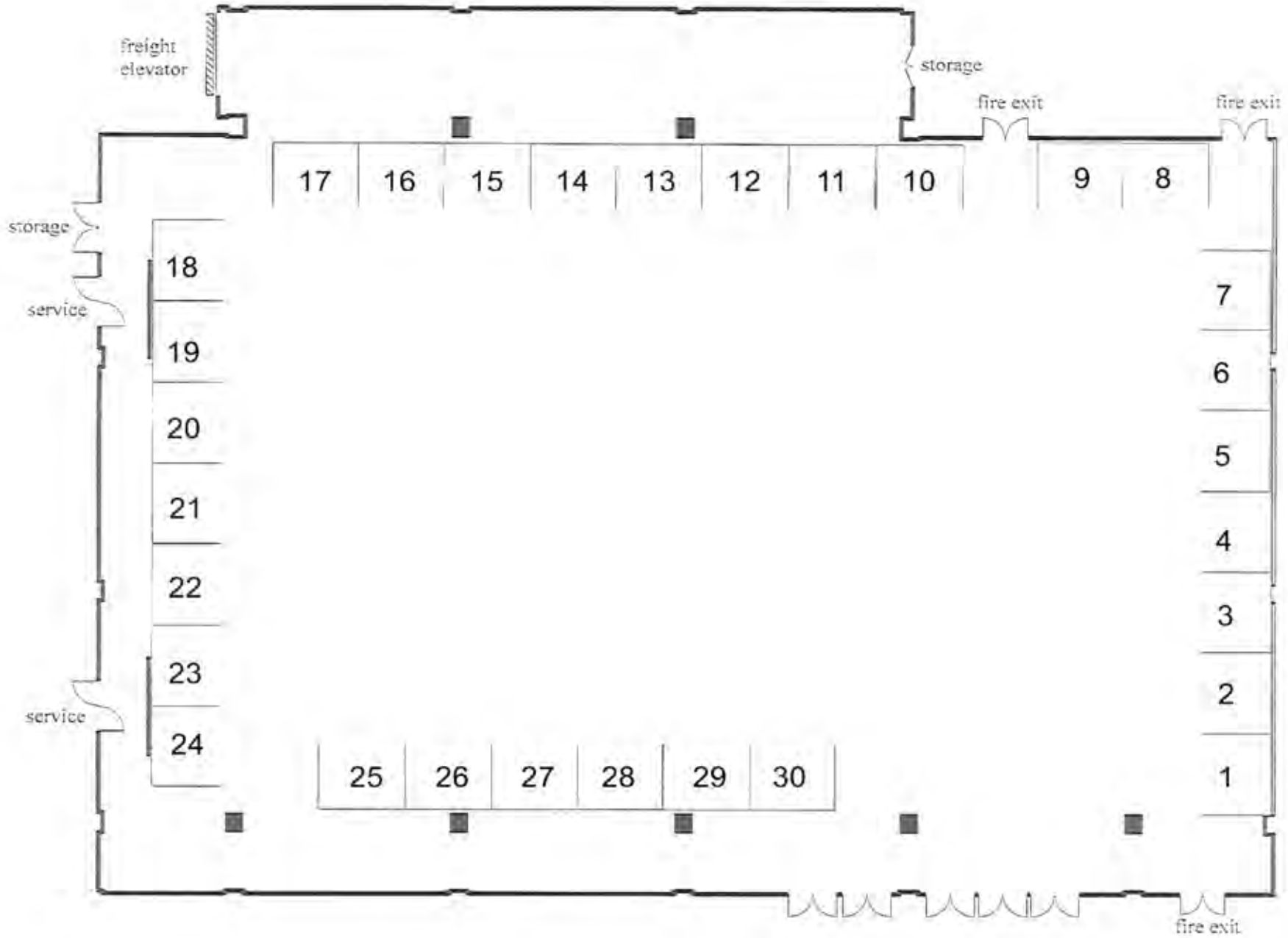

Exhibitors

Exhibitors are located in the International Ballroom on the Lobby Level.
The Exhibitors' hours are:
7:30am to 5pm Monday through Wednesday & 7:30am to 1pm Thurday

Ultra ELECTRONICS | FORENSIC TECHNOLOGY — Booths 1 & 2

BROWNELLS — Serious About Firearms Since 1939 — Booth 3

RS&A INC. — Booth 4

FORENSICS SOURCE — Booth 5

CyberNational, Inc. — Booths 6 & 7

EVOFINDER — Automated Ballistic Identification — Booth 8

foster+freeman — Booth 9

Leica Geosystems — Booth 10

CTS — Booth 11

alicona — Booth 12

CartWinPro — Booth 13

SAVAGE RANGE SYSTEMS — Booth 14

UNITRON — Booth 16

Booth 17

TeamFabrication Bullet Recovery Systems — Booth 25

AEGIS Sciences Corporation — Booth 26

Leica MICROSYSTEMS — Booth 27

PFT — Booth 28

LEEDS FORENSIC SYSTEMS — Booths 29 & 30

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Exhibitor Contact Info

Raffle Items

Raffle Items	Donated By
Two AFTE Hitchplugs	AFTE 2015
Bond Arms 45 LC/.410 Snake Slayer IV Derringer	Bond Arms
Buck Folding Knife	Buck Knives
Bavarian Stein	CartWinPro
Pair of Men's Cowboy Boots	Cavender's
Clear Joe Torso with mold	Clear Ballistics
1)South African knife w/ giraffe bone grips 2) "Concealed Carry" Socks (2 pair)	Charles Clow
1)Mossberg JM Pro 9-Shot 12 Gauge SA Shotgun 2)Interarms ISA-15 Carbine 5.56mm w/ Magpul Extras	Cyber-National, Inc.
1)Wine Bottle Holder 2) Blue Book of Gun Values	Jill Dupre
DeLos Texas Edition Vodka Distilled in Dallas, TX	J & L Emanuel
AFTE 2015 Stained Glass	Don Gunnell
1)Rossi M92 357 Magnum Lever Action Rifle 2)Mossberg Model 26B 22 Rimfire Single Shot Target Rifle 3) Remington Model 591 5mm Rimfire & 5 boxes of ammunition	Luke Haag
Henry 44 Magnum/Special Big Boy Lever Action Rifle w/AFTE 2015 Logo & AFTE2015 Serial Number	Henry Repeating Arms
Kel-Tec PMR-30 22 Magnum Pistol	Kel-Tec
The Matrix	Bob Kennington
2- The Compilation: Short Stories, Cases, & Anecdotes	Charles Meyers
OTiS Elite Cleaning Kit	OTiS

Raffle & Other Donations

Raffle Items	Donated By
1)Shotgun Shell Wreath 2) Smith & Wesson Bodyguard 380 Auto Pistol 3) One Box of Custom Speer Gold Dot Cartridges with AFTE Headstamps	Bob Poole
Kindle Fire HD	Ron Smith & Assosiates
Certificate Ruger 22 Long Rifle10/22 Take-Down Model	Sturm Ruger
Forensic Buddy	Savage Range Systems
Sig Sauer 40 S&W P320 Pistol	Sig Sauer
Three Shotshell Thermoses	StanSport
Leica Stereomicroscope	Pete Striupaitis
1)Certificate for a free Shilen Trigger 2) Certificate for half-off a pre-turned barrel blank	Shilen Barrel
Assorted Firearm Examiner teaching Aids	Evan Thompson
Arroyo Chest Pack	Fish Pond USA
1)Smith & Wesson Wall Clock 2)Smith & Wesson Neon Sign	Smith & Wesson
and much more!	

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The History of Challenge Coins

Members of the U.S. military have a long-standing tradition of carrying a special coin symbolizing unit identity and esprit de corps. With bonds forged in battle thousands of miles from home, these custom coins minted for military units – each bearing their own revered symbols and mottos – capture in metal the essence of their affiliation and their fierce pride. Known to generations of American military personnel as challenge coins, they are a vital part of military life today and are revered by troops in every branch of service.

Today, challenge coins are carried by soldiers, sailors, airmen, and Marines, as well as lawmen and firefighters. These coins identify the bearer as a member of a particular unit with a well-defined history and mission. And, wherever warriors gather, they challenge each other by "coining." The group's unique coin is slammed on a bar to challenge all in the group to display their own coins; he who is last must pay a penalty.

The tradition of challenge coins can be traced to World War II when American forces deployed to the far reaches of the globe securing the nation's freedom. Soldiers back to World War I and the Civil War left for battle with a coin from home in their pocket and kept it after the conflict as a lasting remembrance of their wartime experiences.

American soldiers stationed in Germany after the war adopted that country's popular "pfennig check." The pfennig was the smallest unit of German currency. When someone announced a pfennig check, a soldier who could not produce one had to buy a round of drinks for his buddies.

The popularity of challenge coins spread during the Vietnam War, inspired by Special Forces that minted coins to express the unique identity and strong bond forged between them. Other units wanted their own coin to build camaraderie and symbolize their pride of membership in an elite group.

A challenge coin is not merely a token. Challenge coins today are a tangible source of pride for America's warriors at every level in the chain of command. Commanders use them as on-the-spot awards. Senior military leaders often dole out their coins as gifts to foreign dignitaries or civilian VIPs.

Most important, a challenge coin is carried at all times. Coin checks are still a part of military life, and various penalties are still handed out for those found without their coin. (Some cruelly choose locations apt to yield a victory. Rules commonly followed specify that the coin must be carried at all times; neither shower nor latrine exempt one from producing his coin.)

The History of Memorial Day

Originally called Decoration Day, from the early tradition of decorating graves **with flowers, wreaths and flags, Memorial Day is a day for remembrance of those who have died in service to our country. It was first widely observed on May 30, 1868 to commemorate the sacrifices of Civil War soldiers, by proclamation of Gen. John A. Logan of the Grand Army of the Republic, an organization of former Union sailors and soldiers.**

During that first national celebration, former Union Gen. and sitting Ohio Congressman James Garfield made a speech at Arlington National Cemetery, after which 5,000 participants helped to decorate the graves of the more than 20,000 Union and Confederate soldiers who were buried there.

"We do not know one promise these men made, one pledge they gave, one word they spoke; but we do know they summed up and perfected, by one supreme act, the highest virtues of men and citizens. For love of country they accepted death, and thus resolved all doubts, and made immortal their patriotism and their virtue."

- James A. Garfield
May 30, 1868 Arlington National Cemetery

This event was inspired by local observances of the day that had taken place in several towns throughout America in the three years after the Civil War. In 1873, New York was the first state to designate Memorial Day as a legal holiday. By the late 1800s, many more cities and communities observed Memorial Day, and several states had declared it a legal holiday. After World War I, it became an occasion for honoring those who died in all of America's wars and was then more widely established as a national holiday throughout the United States.

When Is Memorial Day?

In 1971, Congress passed the Uniform Monday Holiday Act and established that Memorial Day was to be celebrated on the last Monday of May. Several southern states, however, officially celebrate an additional, separate day for honoring the Confederate war dead, sometimes referred to as a Confederate Memorial Day: January 19 in Texas; third Monday in Jan. in Arkansas; fourth Monday in Apr. in Alabama and Mississippi; April 26 in Florida and Georgia; May 10 in North and South Carolina; last Monday in May in Virginia; and June 3 in Louisiana and Tennessee.

Memorial Day is celebrated at Arlington National Cemetery each year with a ceremony in which a small American flag is placed on each grave. Traditionally, the President or Vice President lays a wreath at the Tomb of the Unknown Soldier. About 5,000 people attend the ceremony annually.

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Guest Parking: The Hilton Hotel offers on-site valet overnight parking at a discounted rate of $17.50 per night.

Guest Amenities & Services: Unwind in a comfortable guest room with complimentary WiFi, a 37-inch flat-screen TV, mini-refrigerator and work desk. The hotel boasts several eateries including Drago's, a renowned seafood restaurant, Spirits, a chic cocktail bar, and Crescent City Marketplace, the hotel "grocery store". For your fitness and recreation needs, the hotel includes two outdoor pools, an indoor tennis court for tennis, squash, or racquetball, and a fitness center.

Attractions and Activities: This downtown New Orleans hotel location offers stunning views of the Mississippi River and the city. Enjoy easy access to historic New Orleans streetcar lines, top attractions and restaurants. Hilton New Orleans Riverside is next door to the Riverwalk, New Orleans Cruise Port and Harrah's Casino. The hotel is also conveniently located to the following attractions:

- Aquarium of the Americas (3 blocks)
- Arts & Warehouse District (3 blocks)
- Canal Street shops (4 blocks)
- French Quarter (4 blocks)
- Jackson Square (6 blocks)
- National WWII Museum (8 blocks)

Please visit the www.AFTE.org website for host committee information and further details.

Look for our Facebook page: AFTE 2016 New Orleans