FALL SEMINAR TOPICS AND BIOS

TRACK A

(Practitioners Only)

Title Workshop: Observations, Inferences, and Bias

Topic: Observation Skills – All disciplines

Kelly Ayers, Investigator West Virigina University (WVU)

Abstract of Workshop: This workshop will present you with a variety of exercises to assess your ability to process information and remain objective. The exercises will be followed by a discussion of how these issues may affect every day tasks and how potential issues may be mitigated.

Biography of presenter: Kelly Ayers, MS, CSCSA, joined the staff in the WVU Office of Student Conduct as their investigator in 2018. In this role, she works closely with local law enforcement to conduct investigations involving students that may be charged criminally, but also sanctioned through the University. Prior to this position, Kelly served as the Director of the former WVU Forensic Science Academy for Professionals, as faculty in the WVU Department of Forensic and Investigative Science, and as an instructional coordinator with the Forensic Science Initiative. Prior to coming to WVU, Kelly was employed as a Crime Scene Investigator with the Asheville, NC Police Department. She has an undergraduate degree with a double major in Philosophy and Biology (1996) and was the first graduate of the WVU Forensic Identification Program in 2001. Shortly after coming to WVU, she was awarded an MS in Forensic Science Administration from Oklahoma State University.

Ms. Ayers is an International Association for Identification (IAI) Certified Senior Crime Scene Analyst, serves on the editorial board of IDNews, and served as the 56th President of the Chesapeake Bay Division IAI. Ms. Ayers has most recently been appointed the Division Representative of the IAI.

Title: Evidence Detection across the Spectrum: Using Forensics Light Sources from 254nm to over 1µm (>1000nm)

Topic: Processing Evidence using different parts of the spectrum 254nm (RUVIS) 365nm Longwave UV, 400 to 700nm (visible) and 700 to 1100nm (IR)Walter Hiller, SPEX

Abstract of Workshop: Forensic Light Sources are important tools aiding in evidence detection both at the crime scene and in the laboratory. When utilized to their fullest potential, many different types of evidence can be detected, documented, and collected for further processing or enhancing.

In this workshop, you will have the opportunity to try several different types of light sources covering the Shortwave Ultraviolet, Visible, and Near Infrared portions of the spectrum. You will be able to locate numerous types of evidence, such as: hairs, fibers, inks, biological evidence, latent prints, and many others. This workshop is designed for the examiner with no light source experience to one who might want a refresher. There will be a brief lecture on how light sources work, then hands on stations with different types of light sources. The equipment utilized ranges from a conventional LED torches to the latest technology available. Please feel free to bring your own light source or RUVIS and assistance will be given with that device

Biography of presenter: Walter Hiller is an employee of the SPEX Forensics Division of Horiba Instruments Inc. of Piscataway, New Jersey. Walter has worked with law enforcement agencies since 2006 and has trained many departments, at all levels of government, in the use of Forensic Light Sources, RUVIS and basic photography. Walter has held numerous lectures and workshops on the subjects of Forensic Light Sources and RUVIS at regional IAI meetings and International conferences. Walter has acquired an extensive sales and public speaking background throughout his career and is a graduate from Montclair State University.

TRACK B

(Practitioners / Trainees / Students)

Title Presentation: Unseen Surfaces – Amido Black, Wetwop or Acid Yellow 7

Topic: Blood impressions developed on tape

Carlie Hayes, Federal Government

Sergio Becerra Ramirez, District of Columbia Department of Forensic Science

Abstract of Presentation: How would you develop a bloody impression on the adhesive side of tape? Would you use blood reagents or standard sticky side reagent like wetwop? Research done may surprise you with the answer. This lecture will go over the results.

Biography of presenters:

Sergio Becerra Ramirez works in Crime Scene Sciences Unit with the DC Department of Forensic Sciences. He started his career as an intern with the Milwaukee Police Department - Homicide Unit where he sought to improve his investigative interests. His passion led him to finish his Bachelor’s degree from Marquette University and then pursue a Master’s degree at the George Washington University in Crime Scene Investigation. He hopes to continue researching and developing methods to effectively process scenes that are more laborious.

Biography of presenter: Carlie Hayes has a B.S. in Forensic Science from Palm Beach Atlantic University (2017) and a M.S. in Crime Scene Investigation, George Washington University (2019). She received her passion for forensic science volunteering for Dekalb County Coroner’s Office at a young age. Gaining additional experience with internships with the Palm Beach County Sheriff’s Office and the District of Columbia Office of the Chief Medical Examiner. After graduating from GWU this past spring, Ms. Hayes was accepted a special agent position within the Federal Government.

Title Presentation: Investigating Flex Seal for Impression Recovery

Topic: Footwear Casting

Corey Bartoe, Virginia Department of Forensic Science

Abstract of Presentation: There are several methods available for casting both 2D and 3D impressions. However, investigators have asked on several occasions whether or not Flex Seal can be used to cast impressions evidence. This presentation will look at the preliminary research done on this topic and present the results regarding the use of Flex Seal as a casting material.

Biography of presenter: Cory Bartoe received his bachelor’s degree in forensic science in 2008 from West Virginia University. In September of 2008, he began working for Harding Security Associates based out of Charlottesville, VA. His duties there included training Department of Defense personnel in battlefield forensics and conducting biometric exploitation of improvised explosive devices (IEDs) constructed by the insurgency in the Afghanistan region. From 2011 through 2015, Cory worked as a Biometric Examiner for Ideal Innovations based out of Clarksburg, WV. During his time there, he was trained to competency in Ten print, Latent Print, and Facial Recognition Examinations. At present, he is a Latent Print Examiner/Impressions Examiner for the Virginia Department of Forensic Science based out of Roanoke, VA.

Title Presentation: A Dialog on the Effectiveness of LatentSleuth on Difficult Latents and Statistical Error Estimation for an Objective Measure of Similarity to a Latent Image

Topic: Latent Sleuth Workstation / Statistics

Jessica J. Davis, Forensic Scientist Supervisor VA DFS

Anneliese E. L. Deitz Forensic Scientist Latent Prints VA DFS

Richard Smith, VP Products and Services

Dr. Donald Gantz, Professor Emeritus of Statistics

Abstract of Presentation: Sciometrics LatentSleuth technology uses a ridge-skeleton matching algorithm to automate latent print searching. Incorporating all useable information within a latent print, rather than traditional minutia-only based approaches, enables the more challenging latent prints to be searched. Overlays of a latent print, including those that are distorted, contain discontinuous ridges, are of an unknown orientation and/or anatomical aspect and contain limited minutia points, are created from the continuous segments of a ridge, or the ridge geometry. The technology includes automated processing of a latent print and reference images, creation of a geometric overlay, determination of accuracy between overlay and section of reference image and production of a prioritized reference list.

The Virginia Department of Forensic Science has been using LatentSleuth on casework since March 2019. The accreditation of LatentSleuth on casework followed a 2 year study of LatentSleuth’s accuracy and effectiveness. This session will present a “lessons learned” view of LatentSleuth with a focus on latent prints that can be particularly challenging to search manually, including latents lacking orientation and/or anatomical origin, latents that are from the tip region, and latents that consist of primarily a delta. A DFS examiner will be on hand to share their experiences and answer questions about real world use.

A team of George Mason University statisticians is working on an NIJ Office of Justice Programs Grant titled "Statistical Error Estimation for an Objective Measure of Similarity to a Latent Image." The research exploits the Latent to Reference Image WARP technology of the LatentSleuth Workstation. Through largely automated modeling of the similarity of non-mate images to a Latent Image, the model is used to detect True Similarity of a Reference Image to the Latent. The goal of the research project is to put a firm theoretical foundation to the quantification of the degree of similarity that a reference image has to a Latent. The benefits of the research work include increasing the utilization of latents by crime solvers and providing Latent Print Examiners with an objective measure of a reference image's similarity to a Latent.

We will present the results of the measure of similarity algorithm testing on the types of latents that LatentSleuth has been determined to be most effective.

Biography of presenters:

Jessica J. Davis received her Bachelor of Arts degree in Biology with a minor in Chemistry from the University of St. Thomas, St. Paul Minnesota and her Masters in Forensic Science in May 2017 from the University of Florida. Jessica has been employed with VA DFS as a Forensic Scientist Supervisor in the Latent Print Section since September 2011. Her primary responsibilities include processing evidence for latent prints, digital preservation, enhancement, analysis and comparison of latent prints and supervising the latent print section of the Northern Laboratory. Ms. Davis is also a member of the DFS Latent Print Technical Resource Team, which makes recommendations for policy and procedure changes. She has been an IAI Certified Latent Print Examiner since 2007 and has been a member of the IAI since 2001. Ms. Davis is an ASCLD/LAB technical assessor and has served as such for an external audit. She has provided training to new latent print examiners and in a deployed environment instructed soldiers, law enforcement personnel, and Iraqi police in tactical site exploitation, biometric capabilities, and latent print processing and comparison techniques.

Anneliese E. L. Deitz received her Bachelor of Science degree in Forensic Biology with a minor in Chemistry from Western New England University and her Master’s degree in Biomedical Forensic Sciences from Boston University School of Medicine. Anneliese has been employed with the Virginia Department of Forensic Science as a Forensic Scientist in the Latent print section since 2018. Anneliese is a member of the IAI and a member of the Chesapeake Bay IAI.

Richard Smith is the VP of Products and Services at Sciometrics, LLC. Mr. Smith has 34 years of experience in software development. In his role at Sciometrics, Mr. Smith is responsible for all software development and product support. Previously, Mr. Smith has developed software in the defense electronics, command and control, e-commerce, and natural language processing domains.

Dr. Gantz is Professor Emeritus of Statistics at George Mason University. He has been working with Sciometrics LLC since 2009 on FBI-sponsored research projects to apply new technologies to latent fingerprint examination. Sciometrics’ Latent Sleuth technology creates Warps of a latent image to any reference image. These Warps provide a visual frame for an examiner and they are the basis for scoring algorithms that quantify the similarity of the reference image to the latent image. Dr. Gantz is currently being funded by a National Institute of Justice Research Grant whose goal is to exploit state-of-the-art computational resources and modern methods of statistical analysis to make statistically well-founded assessments of the rarity of individualizing information relative to a latent image. Related research has been reported at IPES 2012, EAFS 2012, AAFS 2015, EAFS 2015 and IPTES 2018.

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Title Presentation: 3D Scanning for Crime Scene Documentation

Topic: Crime Scene Documentation

Gabrielle Toy, Evidence Coordinator Leader, Anne Arundel County Police Department Crime Scene Unit (AACO PD CSU)

Abstract of Presentation: This lecture will show how 3D laser scanning was implemented and continues to be incorporated in the Anne Arundel County Police Department Crime Scene Unit (AACO PD CSU) documentation workflow. Participants will be provided with case studies, best practices, and lessons learned while using this type of equipment for documentation.

Biography of presenter: Gabrielle Toy is the Evidence Coordinator Leader for AACO PD CSU and is a certified instructor through the Maryland Police and Correctional Training Commission. Ms. Toy received her Bachelor of Arts degree in Biology with a minor in Criminal Justice from Lycoming College in May of 2008 and her Masters in Forensic Science in May 2011 from Nebraska Wesleyan University. Gabrielle has been employed with AACO PD CSU as an Evidence Coordinator since September of 2015. Her main responsibilities include the assessment and case management of physical evidence obtained by Crime Scene Technicians at major crime scenes to ensure adherence to Federal and State standards, and departmental operating procedures. This includes the identification, collection, packaging, and processing of the physical evidence that is collected by the CSU. The assessment process involves an analysis, evaluation and identification of specific forensic tests to be conducted on physical evidence, the shelf life of the physical evidence, and forensic testing methodologies to support subsequent forensic testing efforts. Prior to being employed with AACO PD CSU, Ms. Toy was employed by American Systems for four years as a contract worker in a forensic laboratory that focused on the development and capturing of latent prints on IED related material.

Title Presentation: Insights into the Application Process: Advice from Hiring Managers

Topic: Hiring Process/Resume/Application Process

Julissa Armstrong, Forensic Supervisor, Suffolk Police Department

Dade Chisler, Forensic Supervisor, Virginia Beach Police Department

Abstract of Presentation: This presentation will offer a basic overview of the hiring process for many levels of forensic careers, covering federal and local processes. Unit managers will discuss ideal candidates, provide insight into what hiring managers and interview panels look for, and provide examples of “do’s” and “don’ts” to help in the application/interview process.

Biography of presenters:

Julissa Armstrong received her bachelor’s degree from Mercyhurst University in Erie, PA. From there she received a Master’s Degree in Forensic Science from Virginia Commonwealth University concentrating on forensic chemistry and physical evidence. From 2011-2018, Ms. Armstrong was a Forensic Specialist with the Virginia Beach Police Department, specializing in video and digital evidence. Ms. Armstrong is now the supervisor of the Crime Scene Investigations Unit with the Suffolk Police Department in Suffolk, Virginia. Additionally, she has been a Division of Criminal Justice Services certified general instructor since 2012. Furthermore, she is one of two LEO employed LEVA (Law Enforcement and Emergency Services Video Association) certified video technicians in Virginia, she is an adjunct instructor with a local community college, and she is a peer reviewer for the Journal of Forensic Identification and Forensic Science International.

Dade Chisler obtained his Bachelor’s degree in Forensic and Investigative Sciences from West Virginia University in 2008. After graduating, he worked at the WVU Forensic Science Initiative, a grant-funded continuing education organization that offered free or low-cost online and onsite trainings to forensic professionals. He then accepted a position with the Virginia Beach Police Department (VBPD) Forensic Services Unit in 2009 working as a Forensic Specialist. In 2013, he began working for the Washington, DC Department of Forensic Sciences Crime Scene Sciences Unit, an independent forensic science laboratory, where he was promoted to Forensic Scientist Shift Supervisor. While working in DC, he completed his Master’s degree in Forensic Administration. In 2016, he returned to VBPD, accepting the position of Forensic Unit Supervisor and continues to prepare the Unit for accreditation.

TRACK C

(Students / Trainees / New to Crime Scene)

Title Workshop: Mock Crime Scene Workshop (Hands on)

Topic: Crime Scene Workshop

Andrew Reitnauer, Owner Delta Forensics

Gabrielle Toy, Evidence Coordinator Leader, AACO PD CSU

Abstract of Workshop: The scope of this workshop will be a combination of classroom lecture, hands on practical exercises, and a mock crime scene. Attendees will learn some latent print processing techniques and photographic principles that can be used on scene, sketching and measurement techniques and proper packaging procedures. Attendees will practice some basic hands on latent print processing on mock items, and ultimately document a mock crime scene in teams. Demo of 3D Scanning for documentation at a crime scene will also be discussed.

Biography of presenters:

Andrew Reitnauer is the Owner of Delta Forensics, a training and consulting company and is currently the Technical Lead Scientist for the Washington DC Department of Forensic Sciences. Mr. Reitnauer has 15 years’ experience in the field of forensic science and has served as a section supervisor and senior crime scene responder, currently holding status as a Certified Senior Crime Scene Analyst through the IAI. He has previously served as an IAI Division President, member of the OSAC Friction Ridge Subcommittee, and has authored numerous publications in the areas of latent print examination, forensic photography and latent print development.

Gabrielle Toy – See MS. Toy’s biography under ‘3D Scanning for Crime Scene Documentation’ title