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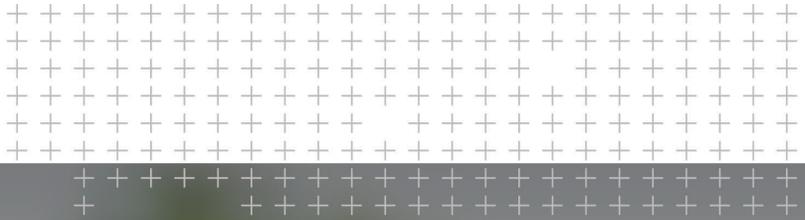


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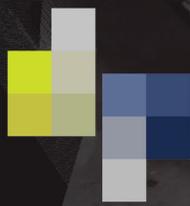
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# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## TUESDAY - OCTOBER 31

**7:00 am – 8:00 am:** Continental Breakfast  
Hanover FG

**8:00 am – 8:30 am:** Welcome and Opening Remarks  
David Dustin, Dustin Forensics, President, IAFSM

**8:30 am – 9:00 am:** Scanning Clandestine Graves  
Jason Keller, Navy NCIS, Treasurer, IAFSM

**Presentation:**

I will present a general overview of the benefit of scanning clandestine graves, compared to the traditional hand measurement technique. I will also give a brief introduction to clandestine grave excavation and the hand measurement technique for background information for the afternoon workshop.

**Biography:**

Jason has been a Special Agent with the Naval Criminal Investigative Service (NCIS) for 10 years and is presently assigned as the Regional Forensic Consultant for the Northeast, Europe, and Africa field offices. As a Forensic Consultant, his primary responsibility is to respond to major crime/death scenes and provide advanced forensic support to field agents during the processing of a scene. Additionally, Jason provides advanced forensic training to NCIS and outside law enforcement personnel. Previously, he was assigned as the Team Leader for the Major Case Response Team (MCRT) at a major NCIS Field Office where he responded to and processed major crime/death scenes, including multiple homicides, two post blast incidents, and the recovery of scattered human remains. Jason is a Certified Crime Scene Analyst with the America Board of Medicolegal Death Investigators.

**9:00 am – 9:30 am:** The Benefit of 3D Scanning in Anthropology  
Tori Berezowski, Ontario, Canada

**Presentation:**

With the emergence of 3D technology in the forensic science field, anthropologists have a new set of tools available to them for documenting and analyzing human remains. The goal of this presentation is to demonstrate various technologies and software available to any anthropologist that may benefit from capturing and using 3D models

**Biography:**

I am in the first year of my MSc degree in Forensic Anthropology at the University of Toronto Mississauga. I have forensic anthropological and medico-legal case work experience in Ontario

as well as Nova Scotia. My interest in 3D forensics started in the final year of my undergraduate degree where I had the privilege of researching the application of 3D scanning to clandestine grave documentation (which is still on-going today). I then decided to do my master's research in applying 3D techniques to other forensic anthropological methods, such as the sex assessment.

**9:30 am – 10:00 am:** BREAK  
Hanover FG

**10:00 am – 10:30 am:** Comparison of Methods for Documenting the Excavation of Human Graves  
Christina Malone, US Army, Criminal Investigation Laboratory

**Presentation:**

This presentation explores the accuracy and feasibility of multiple mapping methods comprising different levels of resolutions. In February 2013, a three-person grave was interred at the Anthropology Research Facility (ARF) at the University of Tennessee, Knoxville. The grave was disinterred in March 2017 as part of another research project. During the excavation process, simultaneous measurements and associated maps were generated using a terrestrial Riegl® VZ-400 Scanner and a FARO® Focus 3D Scanner. Excavation documentation also included hand-drawn maps and site photography. The opinions or assertions contained herein are the private views of the author and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense. Names of commercial manufacturers or products included are incidental only, and inclusion does not imply endorsement by the authors, DFSC, OPMG, DA or DoD.

**Biography:**

Christina A. Malone is a Digital Imaging Examiner at the U.S. Army Criminal Investigation Laboratory, Defense Forensic Science Center (DFSC) in Forest Park, GA where she has worked for nine years. Her duties here include evidence photography, image analysis, and 3D crime scene documentation. Christina is a Certified Forensic Photographer by the International Association for Identification (IAI), a member of the Scientific Working Group on Digital Evidence (SWGDE), and a member of the Organization of Scientific Area Committees, Video/Imaging Technology and Analysis subcommittee (OSAC – VITAL). Christina holds a Master's of Science degree in Forensic Science from Michigan State University.

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## TUESDAY - OCTOBER 31

### **10:30 am – 11:00 am:** Trimble Forensics SX10 and Reveal Mapping Solution

Bryce Adams, Trimble Forensics

#### **Presentation:**

Highlighting how data captured with the SX10 scanning total station, is imported into Trimble Forensics Reveal. Upon completion, the user can accurately capture the details off a scene based on the scene evidence, and tells the story of what happened in a way that is clear, concise, and accurate.

#### **Biography:**

Bryce has thousands of hours of training in the field of crash investigation through schools that include the University of North Florida (PTM) and Northwestern University. He earned his accreditation in crash investigations in 2005 (ACTAR). Bryce is a certified trainer through the Ohio Attorney General's Office and trained numerous future police officers in the area of crash investigations and reporting. Along with training future police officers, he furthered the training in the art/science of advanced crash investigations with veteran officers, as well as civilian/private investigators. He has been asked to speak and instruct in such events as insurance special investigation training, school bus safety training events, and forensic mapping for crime scene investigations. He also testifies as an "expert" in the area of crash investigations in both civil and criminal crashes. After leaving the Sheriff's Office in 2008, Bryce continued investigating crashes privately for attorney's and insurance companies throughout the state of Ohio. At that time, he began traveling the world consulting police agencies in crash investigations and crime/crash scene mapping, diagramming, and animations throughout the US< Canada, and Europe for Trimble Forensics as one of their certified trainers. In 2009, he was hired by Cincinnati insurance as a claims investigator specialist/adjuster. While there, he conducted in service training's and worked closely with the Special Investigations Unit. He has been fortunate enough to be able to investigate crashes and consult attorneys and insurance companies for Officium LLC in the Dayton, OH area, as well as instructing law enforcement and private investigators in forensic mapping and diagramming and crash investigations. He is currently being used by Trimble as a consultant in the area of forensics technology and application.

### **11:00 am – 11:30 pm:** Speed, Detail, and Portability: The Benefits of Handheld 3D Scanning for Forensic Documentation

Chris Ahern, DotProduct

#### **Presentation:**

Analysis of when handheld 3D scanning makes sense, and what the true costs and benefits are. Update on the latest developments from DotProduct software for easy 3D scanning, editing, annotation, sharing, and more, in the highly compressed. DP color point cloud format. I will show a live demo of DPI-8X scanning and overview of best practices for rapid interior capture and discussion of daylight limitations of structured light scanning and workable scenarios/solutions.

#### **Biography:**

Chris Ahern of DotProduct LLC holds a Bachelor of Science in Business Administration with a Marketing Concentration from Northeastern University. Mr. Ahern also studied Criminal Justice at Northeastern and spent over a year working in the Investigations Division at the Cambridge Police Department. Mr. Ahern currently acts as the Marketing Manager for DotProduct in their Boston, MA headquarters. From content marketing to event management and client research, Mr. Ahern has spearheaded DotProduct's marketing efforts over the last three years. With a deep focus on understanding the end use of the product, he has developed an expertise on the technology and its applications, and will provide an interactive demonstration of the scanner, while also offering insight into practical forensic applications.

### **11:30 pm – 12:30 pm:** Buffet Lunch, Hanover FG

### **12:30 pm – 1:30 pm:** Board Coach Bus

### **1:30 pm – 5:30 pm:** Offsite, Clandestine Grave Dig and Collision Crash Course.

### **7:00 am – 8:00 am:** Continental Breakfast, Hanover FG

### **8:00 am – 9:30 am:** Mock Trial

A case presentation with real life evidence and cross examination from real time attorneys.

### **9:30 am – 10:00 am:** Coffee Break, Hanover FG

### **10:00 am – 11:00 am:** Mock Trial – Continuation

### **11:00 am – 11:30 am:** Make an Impact with Criminal Cases Using 3D LiDAR Data in Court Shannon Trammell and Ed Phillis, RIEGL USA

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## WEDNESDAY - NOVEMBER 1

### **Presentation:**

We will present; data that stands up without question is important when those criminal cases go to trial. With new and powerful software too that will make viewing and explaining your data in court a breeze.

### **Biography:**

Shannon Trammell is the Forensic LiDAR Specialist at RIEGL USA, working to meet customers' forensic needs with the RIEGL product line. She has been a proud member of the RIEGL North American Team for over seven years. Her involvement in the forensic field is centered around supporting, maintaining and building relationships to support work with Traffic Homicide Investigators.

Ed Phillips was a consultant to the CIREN (Collision Injury Research and Engineering Network) Project formed by NHTSA to investigate and analyze traffic collisions to understand the impact dynamics and injury biomechanics. Mr. Phillips worked with the San Diego Regional CIREN Group. Mr. Phillips has consulted with police agencies throughout California, as well as the United States Attorney Generals Office, the California States Attorneys Office, San Diego District Attorneys Office, the San Diego Public Defenders Office, the California Department of Transportation, and law firms in the Western United States. Mr. Phillips has received training and certification in Sensing and Diagnostic Module data collection for the Bosch (nee Vetronix) Crash Data Retrieval system. In 2003 Mr. Phillips was awarded a civilian commendation by the City of Oceanside for assisting them with the investigation and analysis of fatal traffic collisions. In 2010 Mr. Phillips was presented with the Outstanding Public Servant of the Year award from the San Diego County Deputy District Attorneys Association. In 2014 Mr. Phillips took training in the use of Riegl 3D terrestrial laser scanners, and is proficient in laser scanning and point cloud registration.

**11:30am – 12:30 am: ATF Bomb Tech Spin Tool and 3D Printing**, Doug Brunelle, ATF

### **Presentation:**

This presentation will emphasize the following: Reverse engineering evidence for testing purpose, ATF DNA Collection Kit for ammo casings, and ATF Interactive Virtual Reality Firearms Catalogue

**12:30 pm – 1:30 pm: Lunch**, On Your Own

**1:30 am – 2:00 pm: Virtual Reality at ESR**

Kurt McManus, ESR

### **Presentation:**

The last year has seen Virtual Reality explode into a variety of industries for a wide range of uses. Forensic Science is certainly one of those industries where the adoption of VR could have a considerable impact, but its use also needs careful consideration. ESR is currently investigating whether VR has a practical use in casework and training and what the next stages of adopting this technology may be.

### **Biography:**

Kurt completed his Masters in Forensic Science through the University of Auckland in 2009 looking at the DNA Analysis of Botanical Evidence. After completion of this thesis, he participated in a number of DNA projects at the Institute of Environmental Science and Research (ESR) before moving to Sydney and working as a scientist within the major crime team at the Division of Analytical Laboratories (DAL) where he examined crime scene exhibits. Following a few years at DAL and work in other scientific industries, he then returned to ESR in the Auckland Forensic Service Centre where he attends crime scenes and examines exhibits. Through this time, Kurt also became a part-time professional photographer which has meant he has taken great interest with specific photography-based projects. Over the past year he has become a trained laser scan operator and has developed the use of 3D modelling using photogrammetry at ESR.

**2:00 pm – 2:30 pm: Accuracy and Repeatability of Bullet Trajectory Measurement in Drywall Using Laser Scanning**

Helen Gurny, Ai2-3D

### **Presentation:**

Three dimensional (3D) technologies such as laser scanning contribute greatly to bullet trajectory analysis and shooting reconstructions. The ability to accurately and quickly document bullet impacts and extrapolate bullet trajectories in the context of a shooting scene is invaluable. This study looked at the accuracy and precision of the Faro Focus S350 laser scanner for documenting bullet trajectories in drywall panels as well as the inter- and intra-observer errors during trajectory rod placement and virtual trajectory marking utilizing software. The overall method error was computed with the utilization of the laser tracker. The average accuracy of the laser scanner was determined with and without the presence of target spheres on the trajectory rods.

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## WEDNESDAY - NOVEMBER 1

Variation in rod placement was computed for drywall and wooden panels to determine inter and intra-observer variations. Virtual rod marking was performed to test the accuracy and precision of manual marking utilizing software. The study concluded that there are many contributing factors that affect bullet trajectory analysis and that the use of 3D technologies can aid in significant reduction of the variation and errors associated with documentation.

### **Biography:**

I graduated the University of Toronto Mississauga in 2016 and received HB.Sc. in Forensic Biology. I completed my internship project with the Center of Forensic Sciences in Toronto and Halton Regional Police which looked at the ability to recover and analyze touch DNA from fingerprints. I currently work as a 3D Forensic Technologist with ai2-3d in Toronto, Canada

### **2:30 pm – 3:00 pm: HIDEvolution Technology Update**

#### **Presentation:**

Donald Stratton has been in the business of building the world's most powerful laptop computers for almost 20 years, and has recently joined HIDEvolution.com to help advise customers on the best combination of components to suit their particular needs. He will be presenting the current state of high end laptop technology, and what can be expected in the foreseeable future.

### **3:00 pm – 3:30 pm: Coffee Break, Hanover FG**

### **3:30 pm – 4:30 pm: Innovative Technologies for Forensic Visualization.** Mark Johnson and Abbe Lyle, Visual Law Group

#### **Presentation:**

Visual Law Group specializes in producing innovative demonstrative evidence for both civil and criminal cases. Over the past two years the company has seen a dramatic increase in demand for interactive demonstrative exhibits and this has led to extensive borrowing from unrelated industries that include: a) entertainment/gaming; b) architectural visualization; c) corporate presentation technology; d) interactive programming; and, e) virtual reality development. In this presentation Mark Johnson will explain and show how these technologies have allowed his company to step up their game by producing innovative exhibits and presentations for major trials.

### **Biography:**

Mr. Johnson practiced as a trial lawyer for 14 years in the Midwest before relocating to California where he founded his first forensic visualization company (Second Chair Litigation Support). Over the past 25 years he has worked on numerous interesting cases that have included the Menendez brothers murder trial, the Italian ski gondola disaster near Cavalese, Italy, the Delta Flight 191 wind-shear disaster at DFW; Alaska Airlines Flight 261 crash offshore of Los Angeles and, recently, the Oakland Ghost Ship Warehouse fire and many others. Mr. Johnson is noted for his innovative use of laser scanning data with drone-based photogrammetry to produce complex exhibits and presentations for courtroom trials.

A native of England, Abbe spent many years working in political offices in Parliament within the United Kingdom and in Europe where she wrote speeches and researched relevant topics of the day. Her move to America resulted in a shift in interests to include photography and a broader depth of creative writing for many Fortune 500 companies. Her passion for flight led her to become a private pilot, and, of late, a remote pilot flying various drones and UAV aircraft. Today she instructs corporate groups in the art of still, aerial and infrared photography, as well as instruction on how to effectively acquire the required skills and knowledge needed to become a remote pilot to fly UAVs for profit. She applies her drone piloting skills and photography now working as a Creative Director and forensic technician for Visual Law Group.

### **4:30 pm – 5:00 pm: All-In-One Reality Capture for Forensics**

Kevin Murphy, Matterport

#### **Presentation:**

Learn how Matterport is taking the crime scene by storm. With 2D and 3D reality capture, you can walk the crime scene anytime from anywhere. You won't want to miss this cop friendly, court friendly solution.

### **5:15 pm – 6:15 pm: IAFSM Welcome Reception** Hanover FG

### **7:00 am – 8:00 am: Continental Breakfast, Hanover FG**

### **8:00 am – 9:00am: Reconstructing the Sydney Lindt Café Siege,** Domenic Raneri, New South Wales Police Force

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## THURSDAY - NOVEMBER 2

### **Presentation:**

In the week before Christmas of 2014, a religious activist entered the bustling Lindt Cafe situated on the main pedestrian thoroughfare in the heart of Sydney, Australia. Armed with a shotgun and what he claimed to be a bomb, he sealed the doors and held 18 people hostage in the name of Islamic State, whilst declaring to have numerous explosive stationed throughout the city. The authorities attempted to peacefully resolve the situation, however after 17 hours the gunman began to execute hostages. Tactical police stormed the cafe and killed the offender, however tragically one hostage also died as a result of police gunfire. This incident was Australia's first experience of a terrorist campaign, and an unprecedented attack in Sydney's heart which left Australian citizens shaken and fearful. Through the ensuing media firestorm and coronial investigation, many questions were asked about why police had not intervened sooner, what had happened as officers entered the stronghold and how one hostage had come to be fatally wounded by police. To seek answers to these and many other questions, NSW Police conducted extensive 3D imaging and reconstruction of the crime, scene, exhibits, deceased individuals and of forensic testing which followed. By recreating the conditions of the crime scene during the siege from the forensic evidence, officers from the Forensic Imaging Section were able to accurately map the locations of the offender, hostages and police at various stages of the tactical entry and to determine the manner of death for the offender and hostages. The event was broken down moment by moment to allow the coroner and general public a thorough understanding of how the tragic events transpired, along with transparency in the actions of police.

### **Biography:**

Domenic Raneri has been an officer with the New South Wales Police Force since 2013. He leads the 3D Crime Scene Reconstruction team of the Forensic Imaging Section, where he has introduced and developed their capabilities for forensic 3D imaging. Domenic has attended and completed crime scene reconstructions for over 60 recent and historical major crimes and events, including homicides, shooting incidents, terrorism events and serious motor vehicle collisions. Some notable cases include the Rozelle Fire, Lindt Cafe Siege and Lin Family Murders. Domenic received his B.Sc(ForSc) from the University of Western Sydney in 2009 and his B.Sc(Hons) the following year. His academic research was focused on enhancing

juror ability to interact with forensic evidence by disrupting their preconceptions of the subject matter. He has lectured on forensic applications of 3D imaging technologies for a variety of detective and specialist unit training courses, as well as numerous national forensic committees and international forums.

**9:00 am – 9:30 am: Using 3D to Tell the Story,**  
Bryon O'Neill, Clackamas County Sheriff's Office,  
Oregon

### **Presentation:**

This presentation will be a conglomeration of case studies comparing 2D deliverables with 3D deliverables in an attempt to highlight how 3D can help better tell the story of what happened in the incident. This will include a look at multiple actual cases I have worked showing how case understanding can be improved by using 3D and taking the courtroom into the world of the scene. We will also look at the different options for 3D deliverables and discuss how to protect against objections. These cases will be from crash scenes and will include not just the end product but will discuss the process used to reconstruct the crashes.

### **Biography:**

Bryon O'Neil has been a Sheriff's Deputy with the Clackamas County Sheriff's Office in Clackamas, Oregon for 11 years. He has also been a certified Reconstructionist for 7 years and has worked with the FARO X330 for 3 years, during which time he has scanned more than 150 crime and crash scenes. He is the Lead Reconstructionist for the Clackamas County Crime Reconstruction and Forensic Technician (CRAFT) Team . Bryon has experience processing laser scan data and creating 3D fly-through animations within FARO SCENE software, as well as using FARO Crash Zone software to create 2D Diagrams, animations and reconstructions for use as evidence in Criminal Court Proceedings.

**9:30 am – 10:00 am: Coffee Break,** Hanover FG

**10:00 am – 10:30 am: Z+F – Imager 5016**  
Chris Kercheval, Z+F

### **Presentation:**

Chris Kercheval of Z+F USA will present information on Z+F's newest scanner, the IMAGER 5016. This scanner features a compact, lightweight design for added mobility in the field. The IMAGER 5016 has double the range & internal storage, as well as half the noise of the previous model, the IMAGER 5010X. Furthermore, it has a new HDR camera, equipped with integrated LED lights. Finally, the 5016 now has vertical image acquisition with up to 11 exposures.

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## THURSDAY - NOVEMBER 2

### **Biography:**

Chris Kercheval is a Technical Sales & Support Engineer with Z+F USA. His day-to-day includes hardware and software training as well as assisting in sales and support. He has over 10 years' experience of field surveying in various areas including: oil and gas, deed research, mortgage survey, subdivisions and ALTA surveys. Chris has been with Z+F for almost 2 years.

### **10:30 am – 11:00 am: Capture and Presentation of a Terrorist Incident for a Coroner's Inquest in the United Kingdom**

Andy Hunter, Metropolitan Police, London

### **Presentation:**

The Computer Aided Modelling Bureau (CAMB) were asked for assistance by the Metropolitan Police Counter Terrorist Command, to survey and present the the post incident scene of a marauding gunman. The presentation will explore some of the decisions and thought processes behind the capture, processing and presentation of the largest loss of UK life to a single terror attack outside of the UK.

### **11:00 am – 11:30 am: Presenting 3D Scan Data with Interactive 3D PDF's**

Matthew Blackwood, Scanning Cars, LLC

### **Presentation:**

Presenting 3D scan data to clients often requires specialized software, significant computer specs, and/or 3D navigation skills. 3D PDF's offer a versatile, user friendly experience that practically anybody with Acrobat Reader can open and navigate intuitively. This presentation gives an overview of 3D PDFs in the forensic industry and some of the pros and cons.

### **Biography:**

Matthew has a Masters in Mechanical Engineering and is a registered Professional Engineer in the state of Alabama. Prior to working four years at an accident reconstruction firm, he worked in a structural dynamic analysis group at NASA and performed failure analysis on the Blackhawk Helicopter. He and his wife are full time parents with part time jobs and call Raleigh, NC home. Matthew started Scanning Cars LLC in 2015.

### **11:30 am – 12:00 pm: Reality Modeling with Bentley's ContextCapture**

Tom Brown, Bentley Systems

### **Presentation:**

An increasing number of organizations are turning to Bentley's ContextCapture for their reality modeling needs. These include: The U.S. Army, including the Army Corps of Engineers; The United States Navy; The United States Marine Corps; Drone mapping companies; Insurance companies; Architect-Engineer firms; Colleges and Universities. ContextCapture incorporates digital photographs or laser scans (or a combination of both) to produce high-quality 3D models which can accurately represent a crime or accident scene. ContextCapture integrates imagery taken from drones or other aerial platforms with ground-based photographs or scans to deliver models with the highest possible resolution. ContextCapture can also scale up to handle models of unlimited size, from college campuses to large cities.

### **Biography:**

Tom Brown manages federal accounts for Bentley Systems, Incorporated. Bentley provides worldleading software and services for enterprises and professionals who design, build, and operate the world's infrastructure. With approximately 3,500 employees in 39 countries, Bentley professionals deliver and support products to help engineers, architects, and asset managers solve their mission-critical challenges. Tom oversees Bentley's portfolio of work in support of federal agencies, and serves as Bentley's principal link to senior leaders across the federal government.

Tom joined Bentley in January 2013. Prior to this, he managed Air Force programs for SAIC's Energy, Environment, and Infrastructure group. His experience includes engineering, design and construction, enterprise-wide management of facilities and infrastructure, asset management, emergency services, disaster management, energy, and environmental management. Before entering the private sector, Tom completed a 24-year career with the U.S. Air Force, retiring in 2008 with the rank of colonel. His career included command of three civil engineer squadrons and tours of duty in Korea and the Middle East, including duty in Operation Iraqi Freedom. Tom earned a Bachelor of Science in Civil Engineering from Norwich University and was selected for the Chi Epsilon and Tau Beta Pi engineering honor societies. He also earned a Master's Degree in National Security Studies from Georgetown University. Tom is a life member of the Society of American Military Engineers and a member of the Association of Energy Engineers.

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## THURSDAY - NOVEMBER 2

**12:00 pm – 12:30 pm: FARO Technology Update**  
FARO will discuss benefits, features, and process

**12:30 pm – 1:30 pm: LUNCH**, On Your Own

**1:30 pm – 2:00 pm: Future of Virtual Reality in Field of Criminal Justice.** Rory Wells, Ocean County Prosecutor, New Jersey, Co-chair Virtual Reality/Augmented Association Criminal Justice Committee

### **Presentation:**

Introduction to VRARA Criminal Justice Committee and moving forward in the study and direction of virtual reality, augmented reality and mixed reality and its applications in the field of criminal justice, including a broad range of uses such as investigations, training, future courtroom applications and rehabilitation. There is no true widespread recognition of how these technologies will completely change the way we live and interact. Our goal is to be at the forefront in this area relating to criminal justice.

### **Biography:**

Rory Wells is a licensed, practicing attorney currently serving in the Ocean County Prosecutor's Office as an Assistant Prosecutor. He is also Co-Chair of the Virtual Reality/Augmented Reality Association - Criminal Justice Committee. Rory has handled numerous cases including robberies, theft, drug cases and aggravated assaults while always trying to assess with fairness and justice. He is currently assigned to the Community Relations Unit as the Community Relations Officer. He receives numerous requests to speak in the community and has spoken publicly to thousands of people in his professional career including law enforcement, military, non-profit, educational and citizen groups on a range of topics.

**2:00 pm – 2:30 pm: Virtual Reality as a Tool for Criminal Justice.** Eduardo Neeter, Principal - FactualVR, Inc. Co-chair Virtual Reality/Augmented Association Criminal Justice Committee

### **Presentation:**

The presentation will introduce VR/AR as a technology, including a quick history review and understanding of core capabilities and their contribution to the field of Criminal Justice, particularly in training, investigative and courtroom applications. We will discuss some applications of VR/AR, including Crime Scene recreation using scanned data, as well as use of VR/AR as evidence in the courtroom, current research in the field for potential future applications. capabilities.

### **Biography:**

Principal - FactualVR, Inc.  
Co-chair Virtual Reality/Augmented Association Criminal Justice Committee

**2:30 pm – 3:30 pm: Coffee Break**, Hanover FG

**3:30 pm – 4:00 pm: Leica Technology Update**  
Frank Hahnel, Leica Geosystems

### **Presentation:**

Frank John Hahnel, III has been employed with Leica Geosystems, Inc. since May 2000, and currently holds the title of Public Safety Account Manager – East. Mr. Hahnel works with local and state law enforcement agencies and private accident investigation and reconstruction firms on evaluation, implementation, and daily use of high accuracy three-dimensional mapping equipment. He is an expert in the use of 3D laser scanning systems and has assisted multiple law enforcement agencies scan, process, and reconstruct active accident and crime scenes. Mr. Hahnel is a member of the International Association for Identification and the International Association for Counterterrorism & Security Professionals. He is also a volunteer with the Orlando Police Department's Crime Laboratory. Mr. Hahnel, a Native Floridian, has an education and prior employment background in land surveying. He has worked on a wide variety of projects in both Florida and Georgia for PBS&J, Inc. (now known as Atkins), a major civil engineering and land surveying company. Mr. Hahnel's initial project responsibilities at Leica Geosystems, Inc. (formerly Cyra Technologies, Inc.) began with using a laser to scan the exterior of the H.L. Hunley Civil War submarine in 2000. In 2001, he aided the Army Corps of Engineers at Ground Zero of the World Trade Center, four days after the 09-11 terrorist attacks. Shortly after in December of 2001, he scanned the site of attack at the Pentagon for the Federal Bureau of Investigation (FBI). In the winter of 2002, he worked with the New York Police Department, New York Sanitation Department and the FBI to laser scan the World Trade Center debris piles at the Fresh Kills Landfill. His personal photographs, scan data, and story were published in Professional Surveyor Magazine in a three part article in 2011. In June of 2016, Frank assisted in the Pulse Nightclub Terrorist attack that killed 49 people in Orlando, Florida. He worked alongside the Orlando Police Department bringing two PS40 Forensic 3D Laser Scanners to help complement their existing C10 scanner. Mr. Hahnel continues to educate law enforcement agencies all over the country on the use of assorted forensic mapping tools for both crime and crash scenes.

# SPEAKER PRESENTATIONS AND BIOGRAPHIES

## THURSDAY - NOVEMBER 2

**4:00 pm – 5:00 pm:** “The VHX Series Digital Microscope – How technology is advancing and the benefits of 3D Microscopy  
Gregory Lary, KEYENCE

**Presentation:**

The VHX is an all-in-one microscope that incorporates observation, image capture, and 2D/3D

measurement capabilities. Any user, regardless of their experience, can now obtain high-quality, fully-focused images in an instant.

**Biography:**

I represent Keyence's VHX 6000 Digital Microscope for the state of Georgia. Working locally from our Atlanta office, I provide on-site demonstrations, consultation and support for existing systems.

## FRIDAY - NOVEMBER 3

**7:00 am – 8:00 am:** Continental Breakfast,  
Hanover FG

**8:00 am – 8:30 am:** Officer Involved Shooting:  
Case Study

William Henningsen, Collision Forensic  
Investigations, Omaha Police

**Biography:**

William Henningsen is a 21 year veteran of the Omaha Police Department Crime Lab. Certified as Crime Scene Analyst by the International Association for Identification (IAI) and is currently certified as a Forensic Video Technician by the Law Enforcement and Emergency Services Video Association (LEVA). He is the primary in-house instructor for his agency. He has been involved in

assisting Crime Scene Units across the country in their adoption of laser scanners and in the 3D documentation of explosion and fire scenes to include a large scale gas explosion in Omaha's Old Market. Leica dealer: [www.collisionfs.com](http://www.collisionfs.com)  
Collision Forensic Solutions.

**8:30am-9:30am:** Best Practices

**9:30 am – 10:00 am:** Coffee Break, Hanover FG

**10:00 am – 11:30 am:** Presentation of Workshop  
Results

**11:30 am – 12:00 pm:** Closing and Final Remarks  
David Dustin, President of the IAFSM

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***We hope to you all again next year!***



**2018 IAFSM Conference  
Date and location TBA**

# NOTES AND REFLECTIONS



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