

LEVA 35th Symposium

Class title	Abstract	Presenter	Employer	Country
Photogrammetry in Forensic Video Analysis	Photogrammetry is the science of extracting measurements from photographs. As part of the regular function of a forensic video analyst, it may be required to determine aspects of a person/object or vehicle's speed, height or geometric characteristics, or back calculate positions of people/objects or vehicles as they were captured through video. This presentation will cover an overview of the history of photogrammetry, its application and utility for a forensic video analyst and the basic concepts and methods used. It will also introduce the possibility of a future course with more in depth training with regard to the software used for the purposes of photogrammetry.	Nishan Perera	30 Forensic Engineering	Canada
An inside look into the creative visual mind of a learning machine	In this lecture, we will discuss the usage of Artificial Intelligence for the creation and processing of digital media evidence. Illegal activities associated to this new technology are a real burden for the criminal justice system. You will learn how deep fakes are created and understand the concepts beyond "text-to-image" stable diffusion. We will also discuss the delicate topic of image enlargement using trained neural networks. Above all, we will learn how to identify and fight the illegal usage of these new technologies.	Emi Polito	Amped Software	UK
Prove It! The Future of Synthetic Media (AI) Detection in Justice and Public Safety	Tom Cruise performing magic tricks on TikTok, foreign leaders declaring acts of war...the prevalence of high-quality synthetic media online has brought a new age of disinformation and distrust to society. How does this relate to evidence admissibility in criminal investigations and legal proceedings? What is the true threat to public safety? This session will address the real concerns with synthetic media as it pertains to law enforcement and forensic examiners who have to authenticate evidence for court. Reliable, explainable, and repeatable techniques for the examination and authentication of video evidence will be introduced.	Brandon Epstein	Medex Forensics	USA

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<p>Synched or Not Synched - That is the Question: When Video and Audio collide!</p>	<p>The course will begin with a short lecture on digital audio and its relationship with video files. After which students will work on four cases with issues relating to the syncing of audio and video files in an aggravated assault, and three officer involved shootings. The workshop will include synchronizing a gunshot (audio) from one DVR with a video recording from another DVR, determining the cause of missing audio (gunshot) from a video file, and determining the order of shots fired using speed of sound calculations. Students will need their own laptop with video and audio software. Recommended software to include, Audacity and/or Adobe Audition, Axon Investigate, and/or Amped FIVE as the instructor will use these.</p>	<p>Christopher Andreatola</p>	<p>Tucson Police Department</p>	<p>USA</p>
<p>Mastering CrimeLines: Interactive Timeline Creation for Criminal Investigations</p>	<p>Unlock the full potential of your criminal investigations with our comprehensive course on using CrimeLines software. Designed by a former prosecutor for crime lab technicians, forensic video analysts, law enforcement professionals, and prosecutors, this course teaches you how to create customized legal timelines that clearly and convincingly communicate critical case details. Forensic Video Analysts constantly strive to create timelines, especially of video events. However, it can be frustrating that tools like Photoshop and PowerPoint are not specifically designed for creating and presenting timelines. This is why we built CrimeLines software: it is specifically dedicated to building simple, easy-to-use, and powerful chronological presentations of digital evidence.</p>	<p>Brian Carney, Esq.</p>	<p>WIN Interactive, Inc.</p>	<p>USA</p>
<p>Case Studies in Forensic Video Analysis, 3D Modeling & Animation, and Visual Storytelling</p>	<p>In this presentation, Brian Carney, Esq. will delve into three compelling case studies that highlight the critical role of video evidence in the pursuit of justice. This course is designed to provide forensic video analysts with valuable insights and practical lessons that can be applied to real-world scenarios. Through these case studies, participants will gain a deeper understanding of the methodologies and technologies that can make or break an investigation.</p>	<p>Brian Carney, Esq.</p>	<p>WIN Interactive, Inc.</p>	<p>USA</p>

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<p>It's not your grandmother's input, Ace</p>	<p>Axon Investigate is a robust workflow engine that offers a complete solution for video evidence processing, from the original source to the final report. It stands out with its impressive capabilities for reproducing most third-party videos, an easy-to-use interface, comprehensive features, and detailed reporting. Axon Investigate is the preferred video solution for new investigators and experienced video analysts. Integrated with Evidence.com, Axon Investigate enables users to download case evidence into the application for analysis and create compelling demonstrative exhibits, which can be easily uploaded back into Evidence.com as derivative evidence. For a chance to explore Axon Investigate's features, join this 3-hour hands-on workshop (please bring your own laptop). You will work through the latest updates and a case study on measuring exact distances from video using the overlay tool.</p>	<p>Mark Andrews</p>	<p>Axon Enterprise</p>	<p>USA</p>
<p>AI for Image and Video Forensics: Mine of Information or Minefield?</p>	<p>In this session, we will discuss the potentials, challenges, and concerns related to the use of Artificial Intelligence (AI) while working on photo and video evidence. We will suggest some high-level guidelines for the potential use during investigations, and we will present a few applicative examples and related results, such as the enhancement of faces, the interpretation of low-quality license plates, and the detection of deepfakes. We will also discuss court cases and regulatory updates related to the use of AI on video evidence.</p>	<p>Martino Jerian</p>	<p>Amped Software</p>	<p>Italy</p>
<p>Getting the Whole Picture in Proprietary Video Evidence</p>	<p>In this session we will review how a standard video container stores data, then compare this to proprietary video samples. Through real world proprietary examples, we can see how important it is to correctly identify and extract the necessary video elements and all available frames in order to facilitate viewing the file completely and accurately.</p>	<p>Melissa Kimbrell</p>	<p>Amped Software</p>	<p>Italy</p>

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<p>Presenting Demonstrative Evidence in Court</p>	<p>Join us for an exciting 4-hour hands-on class where you'll delve into real-world or simulated examples to create court-ready exhibits. Get ready to master the art of presenting video evidence using annotations, redactions, and compelling presentations with Amped FIVE, all while maintaining a solid and forensically sound workflow. To ensure everyone can participate, trial software and samples will be provided, so there's no need to have FIVE installed beforehand—just bring your computer. By the end of the session, you'll be creating illustrative and comparison exhibits, seamlessly combining video clips from different sources, and confidently redacting audio and video for public release. Gain valuable insights into Amped FIVE and enhance your skills for court or public domain presentations. Don't miss out on this invaluable opportunity to elevate your expertise!</p>	<p>John Barahona</p>	<p>Amped Software</p>	<p>USA</p>
<p>The Amped Software Ecosystem, An Overview</p>	<p>Amped Software provides tools that can be used to resolve the issues of video examiners from the crime scene to the courtroom. Whether it be proprietary video conversion, quick viewing and correcting of video files, in-depth file analysis, enhancement, clarification, and restoration of video and still images, presentation, annotation, redaction, integrity and authentication verification, or forensic reporting, Amped Software has a solution for you. Come spend some time with the Amped Software team as we guide you through the progression of each of our tools and demonstrate how they can help satisfy the needs of your video investigation unit.</p>	<p>Emi Polito</p>	<p>Amped Software</p>	<p>UK</p>
<p>Using Adobe Animate for Court Presentations Dog and Pony</p>	<p>This presentation will show attendees how Paul leveraged Adobe Animate in Hennepin County to present video evidence and images and audio. How Animate not only shows evidence but solves problems in presenting evidence. The class will not go over how to use and program Animate, but rather what the potential is.</p>	<p>Paul Hartzell</p>	<p>Hennepin County Attorney</p>	<p>USA</p>

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<p>No Scanner – No Problem! Revisiting old school vehicle speed estimates.</p>	<p>3d scanning of crime scenes and collisions is all the rage. Some claim it is the only accurate method for performing a vehicle speed estimate from video footage. In a perfect world, we would all have the hardware and software to perform these types of analysis. But none of us live in that perfect world. Can the “old school” methods of vehicle speed estimation still be performed? Are they accurate? This case study involves a traffic fatality involving a vehicle which was estimated to be traveling almost 3 times the posted speed limit. We will discuss three analysis methods to include calibrated speed runs, straight-line photogrammetry, and reverse projection, which were all performed on this case and compare the results.</p>	<p>Christopher Andreacola</p>	<p>Tucson Police Department</p>	<p>USA</p>
<p>Calculation of vehicle speed from video evidence - an introduction</p>	<p>An introduction with respect to position vehicles within video footage and establishing the time intervals between images. This presentation will explore the components required to calculate vehicle speed within CCTV footage, with practical tips and techniques for refining results</p>	<p>Mark Crouch</p>	<p>FCIR</p>	<p>UK</p>
<p>Photogrammetry in Forensic Video Analysis Part II</p>	<p>Following the lecture in photogrammetry, students will get a hands on introduction to SynthEyes; a program traditionally used in the visual effects industry. The hands on intro will allow students to gain an understanding of how camera tracking works, first hand, and how they may effectively use it in their case work when it comes to tracking moving cameras from body cams or dashcams.</p>	<p>Nishan Perera</p>	<p>30 Forensic Engineering</p>	<p>Canada</p>