



W17 A Think Tank on the Leading Edge of Forensic Science: Big Data, Head Trauma, Risk Evaluation, Drones, Video Analysis, and Disruptive Technology

Laura L. Liptai, PhD, BioMedical Forensics HQ CA/FL, Moraga, CA 94556; Zeno J. Geradts, PhD*, Netherlands Forensic Institute, Den Haag, SH 2497 GB, NETHERLANDS; Curtis B. Coulter, JD*, Law Offices of Curtis B. Coulter, PC, Reno, NV 89501; Victor W. Weedn, MD, JD*, George Washington University, Washington, DC 20007; Anthony M. Hallett*, Unmanned Response, Inc, Beaver, PA 15009; Stephanie Domitrovich, JD, PhD*, Sixth Judicial District of PA, Erie, PA 16501; Mary E.S. Case, MD*, St. Louis County Medical Examiner, St. Louis, MO 63134; Scott Blair, JD*, Brain Injury Law of Seattle, Edmonds, WA 98020*

Learning Overview: After attending this presentation, attendees will better understand the various new advances in forensic science that may have an impact on their work. The goal of this presentation is to reveal new developments that revolutionize forensic science and explain how these developments may impact the work of forensic scientists. Practical examples will be presented on big data, head trauma, risk evaluation, drones, video analysis and disruptive technology. This presentation will provide an overview of exciting new advances and open a forum for the discussion of issues that may arise regarding these new developments that will ultimately impact the forensic science community. A wide variety of new technology that will soon impact forensic science has been identified within the Think Tank Committee of the Forensic Sciences Foundation, Inc.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing the impact of new developments on big data, head trauma, risk evaluation, drones, video analysis, and disruptive technology.

The benefits of real-time, onsite forensic investigations are multidisciplinary. New technology can increase the speed and efficacy of the criminal justice system. However, the benefits of this technology can only be realized if the quality of the data can always be guaranteed and the findings can be admitted by the court as proper forensic evidence. Efforts are being undertaken worldwide to innovatively develop integrated forensic platform solutions that will allow for the investigation of human biological traces, the chemical identification of illicit drugs, and the study of large amounts of digital evidence. The technological advancements that are revolutionizing forensic science could lead to a paradigm shift in which a new role of the forensic expert emerges as the developer and custodian of integrated forensic platforms. A means to revolutionize resolution in court cases will be presented by a legal innovator.

Another exciting topic is the use of drones in forensic science. You will see both the challenges and the opportunities that arise and how to further integrate drones into the justice system. First responders regularly use drones to gather data and assess situations. The data obtained could benefit those in the forensic, medical, or insurance profession. However, drones are also being utilized to conduct criminal matters. As a result, a protocol for forensic scientists to examine captured drones is being undertaken.

Attendees will also investigate head trauma by studying the traumatic unconscious and how that affects forensic pathology as well as biomedical engineering. There are numerous cutting-edge advancements in medical and biomedical forensics that can change the way one addresses head trauma analyses.

Video footage can have a revolutionary effect on forensic engineering analysis. How can that footage be properly used and improperly abused? Captivating examples will be presented.

Last, attendees will dive into how technology can be disruptive and the effect it has on the judicial system. A Pennsylvania judge will provide insight into how judges and court personnel will adapt since the current legislature will not be able to anticipate every outcome of the changing technology.

Big Data, Head Trauma, Technology