



NAFE Special Seminar
New Orleans – January 15, 2017
(8 Hours PDH/CPD)

“Ethics for Engineers – Real Issues Faced by NAFE Members in Recent Months”

Arthur Schwartz, Esq. (3 H) & Samuel Sudler, PE (886 S)

ABSTRACT: Schwartz and Sudler will lead a discussion with attendees on a variety of forensic engineering ethics issues raised by NAFE members including handling accusations by opposing experts of intentional deception, complaints filed with the state PE board, filing complaints with state bar associations, allegations of intentional manipulation of evidence, obligation of due diligence in selecting clients, disagreements with clients regarding the conducting of forensic experiments, the line between serving as an expert and an advocate, handling of retainers and many other issues. Attendees are strongly encouraged to offer additional examples of forensic engineering ethical issues of interest to them in advance of the session by sending examples to aschwartz@nafe.org (anonymity will be respected).

SPEAKER BIO: Arthur Schwartz is the deputy executive director and general counsel of the National Society of Professional Engineers (NSPE) and also serves as the Executive Director of the National Academy of Forensic Engineers (NAFE). Schwartz is a member of the American Bar Association, as well as the District of Columbia, Florida, and Virginia Bar Associations. He is also a certified association executive (CAE). Schwartz has authored more than 400 published ethics decisions and has written dozens of articles and papers addressing such topics as the protection of the public health and safety, conflicts of interest, duty of confidentiality, professional competency, liability, risk management, contracts, insurance, and other professional practice issues.

SPEAKER BIO: Samuel G. Sudler III, P.E., IntPE, C.F.E.I., C.V.F.I., is a Senior Project Engineer at SEA Ltd. He specializes in analyzing the failure of electrical components and systems, electrical faults and malfunctions, as well as possible failure modes. Mr. Sudler has more than 10 years of experience relating to industrial and manufacturing facilities installing, commissioning, programming, troubleshooting, and repairing low-voltage to high-voltage electrical equipment. Mr. Sudler has conducted numerous Failure Mode Effect Analysis (FMEA) as it relates to equipment failures, or industrial accidents as well as investigations concerning numerous consumer and vehicle products produced by leading manufacturers in product liability litigation. Mr. Sudler is licensed as a Professional Engineer in over 35 states and registered internationally as an International Professional Engineer.

“Projects Related to the Aftermath of Katrina and Rita in 2005”

Charles Prewitt, PE (251 F)

ABSTRACT: This presentation discusses the engineering, political, and social failures that resulted in the catastrophic failure of the New Orleans Hurricane Protection System which combined with a vicious storm in August 2005 to create one of the worst disasters in the history of the United States. New Orleans is surrounded by water and because of decades of coastline subsidence and saltwater intrusion, the metropolitan area is at risk from hurricanes and severe storms. The Hurricane Protection System was supposed to protect the city, but due to the combination of engineering design failures, poor planning and a

fragmented management, the floodwalls and levees failed and caused catastrophic flooding in 80% of Orleans Parish and significant damages in surrounding areas. This presentation will show how forensic engineering studies by private, professional, and governmental groups uncovered the most significant contributing factors in the Hurricane Protection System failures.

SPEAKER BIO: Charles E. Prewitt, P.E. is the President and Principal Mechanical Engineer with Denson Engineers, Inc. Forensic Consultants. He received his Bachelor of Science in Mechanical Engineering from the University of Kentucky and his Masters of Mechanical Engineering from Tulane University. His forensic engineering assignments include motor vehicle accident reconstruction, industrial accidents, mechanical equipment failures, fire cause and origin, personal injury investigations and product liability claims. Mr. Prewitt is recognized by several Federal and State Courts as an expert in Mechanical Engineering and Accident Reconstruction.

“Forensic Analysis of Forensic Testing on the Deepwater Horizon BOP Control System”

Arthur Zatarian, PE (774 M)

ABSTRACT: A review of a forensic analysis of the forensic testing performed on the Deepwater Horizon blowout preventer (BOP) control system. The investigation evaluated the ability of the subsea BOP control system to perform as required during the oil spill event in April 2010. The primary issues were performance of a miswired dual coil solenoid valve, and the state of a 27V non-rechargeable battery used for emergency operations. The analysis considered the initial testing performed by a Joint Investigation Team (JIT) as well as supplemental testing performed by BP and others. The analysis resolved several discrepancies in the official and unofficial test reports, and aided the Court in understanding conflicting expert opinions. The Court determined that the miswired valve could not operate, and that the battery was depleted, thereby preventing autonomous operation of the blowout preventer during the oil spill event.

SPEAKER BIO: Arthur M. Zatarain is a former public-company executive who now consults as a forensic engineer and expert witness for patents, accidents, and commercial matters. His career since 1975 includes industrial, oilfield, and medical interests, both domestic and international. His expertise includes electrical and electronic engineering, industrial computers, and automated equipment. He has qualified several times as an expert witness in US Federal Court, most notably in the Deepwater Horizon / BP oil spill trial.

“Security of Signing/ Sealing Engineering Documents”

Mitchell Maifeld, PE (437 A)

ABSTRACT: You have embossed the D-size print of your design and your paper report, but your client is paperless and wants only the electronic version in a non-proprietary format. Any PE can stamp a piece of paper, but are you talented enough to stamp the ones and zeros that make up a PDF? Using a digital certificate instead allows you to truly get paperless while adding even more security and information than a PE stamp could ever contain! This seminar will teach you how to apply digital signatures to verify authorship, prevent changes, and control the distribution of your electronic documents.

SPEAKER BIO: Mitchell J. Maifeld is a Professional Engineer in Katy, Texas with nearly 20 years of engineering experience. He earned a Bachelor of Science degree in Electrical Engineering from Iowa State University, studied at Villanova, and is currently enrolled in the Self-Driving Car nanodegree program with Udacity. Since college, he has worked all around the U.S. in jobs and on projects from software to hardware, from design to

debug, and from forensics to computer animation. He has completed projects as large as cellular phone tower placement and as small as hand-held RFID. He is an Associate Member in the National Academy of Forensic Engineers, a member of IEEE and their Houston Consultants Network, and an ASTM member on committees E58 Forensic Engineering and E30 Forensic Sciences. He is a Co-Inventor on U.S. Patent # 7,263,375. Find his CV at <http://www.zenzic.biz>

Evidence Handling for the Forensic Engineer”

John Certuse, PE (708 F) & Bill Ver Eecke, PE (251 C)

ABSTRACT: This seminar will address the issues associated with the identification, collection, documentation, testing and storing of evidence for the forensic engineer. Applicable guidelines from ASTM and NFPA 921 will be discussed as well as examples presented showing evidence handling documentation and other evidence custody practices.

SPEAKER BIO: John Certuse is a mechanical engineer, certified fire investigator and President of ISE Engineering in Attleboro Massachusetts. ISE Engineering maintains an 8000-square foot storage and testing facility providing forensic engineering investigations and evidence preservation services for cases throughout the Northeast as well as nationally.

SPEAKER BIO: Bill Ver Eecke received his Bachelors in Mechanical Engineering in 1968 and has been managing Forcon International’s Forensic Engineering business since 1990. Forcon provides forensic engineering services out of five offices concentrated on the east coast with a team of in-house engineers supplemented by a team of independent contractors with specialized expertise. Forcon’s forensic engineering business volume is approximately 1,500 new assignments a year.