The Use of Engineering to Reconstruct Vehicle Accidents

Abstract: Did you ever drive by a vehicle collision on the road and wonder how and why it occurred? This seminar will discuss the Mechanical and Human Factors Engineering principles used to reconstruct vehicle accidents. Aspects of the talk include how field investigation, testing, and computer simulation are used to evaluate the contribution of the human, vehicle, and physical environment to an accident. Example projects that demonstrate the breadth and diversity of what can be reconstructed will be detailed.

Bio: Dr. Zolock's expertise in the field of engineering includes analytical and experimental evaluation of vehicle crashworthiness and occupant protection, vehicle dynamics, and mechanics. He specializes in automobile, bus, pedestrian, heavy truck, and rail vehicle accident investigation and reconstruction. His experience in photogrammetry, event data recorder (EDR) analysis, full scale rail vehicle testing, physical testing and evaluation of the design and performance of Roll Over Protection Structures (ROPS) for off-highway recreational vehicles, and automobile crash, dolly rollover, handling testing, sled testing, and FMVSS testing enhances his consulting contributions to the reconstruction of accidents. His work has emphasized study in the areas of materials, applied mechanics, dynamics, vibrations, finite element analysis, vehicle handling and collision simulation, biomechanics and occupant injury modeling, and component and full-scale field-testing.