

MEA EDUCATIONAL SEMINARS – Possible Topics and Case Studies

MEA's Educational Seminars can be customized around any of our 5 engineering practice groups – Transportation, Aviation, Injury, Products and Property & Premises. Typically our presentations focus on case studies and demonstrations to help provide context for the technical information. The list below outlines a number of topics that can be covered. We can also discuss any specific case examples that you can suggest.

TRANSPORTATION

- Determining vehicle speed and opportunities for drivers to avoid collisions
- Seat belt usage
- Crash Data Recorders (Black Box) in cars
- Human Factors in car crashes (i.e. Nighttime visibility, perception-response variables)
- Unique collisions (i.e. Pedestrians, motorcycles, tractor-trailers)
- Low velocity impacts (can include a parking lot demonstration)

INJURY

- General discussion of biomechanics, its application to injury causation and how it compliments collision reconstruction and property & premises investigations
- Representative cases (i.e. Seat belt effectiveness, event comparisons, sporting injuries)
- Biomechanics of head injury and helmet effectiveness

Slip, Trip and Fall

- How do people slip?
- Introduction to the science of walking and slip biomechanics
- Presentation of new research using tribometers and human subjects
- Case studies to demonstrate how a Biomechanist can help answer difficult questions involving slip, trip and fall events

PRODUCT, PROPERTY & PREMISES

- Overview of forensic engineering with an emphasis on product litigation and property losses, skills and tools of the failure analyst; finding the root cause in a failure analysis
- Metallurgy – What can we tell from broken bits of metal? Examining materials after a loss, what they can tell us, and case studies
- Sample case studies include:
 - Trailer hitch and safety cable failure leading to a head on collision with a detached towed vehicle
 - Sudden fuel discharge in portable stove due to abuse
 - Entrapment in a grain auger during unloading
 - Water escapes in a sprinkler system due to installation defects

~Please contact Shannon Payne, Business Development and Client Relations at (905) 507-1844 for further information on how to book your customized MEA Educational Seminar~