DESIGN RESEARCH ENGINEERING

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MATTHEW WEBER, B.S.E., ACTAR

Professional Specialization

Accident analysis and reconstruction for passenger vehicles and heavy trucks, including computer simulation and photogrammetry. Trained in data retrieval and analysis for vehicle Event Data Recorders (EDRs) for passenger vehicles and heavy trucks. Analysis of restraint system usage in accidents. System and component testing, including data reduction and analysis. Digitization of accident scenes, vehicles, and vehicle components, using 3-D Scanning and Total Station. High quality graphics rendering of accident scenes, vehicles, and accident sequences.

Professional Background

B.S.E. (Mechanical Engineering), University of Michigan, 1989
Graduate courses in Dynamics, Statistics, Physiology, and Biomechanics, University of Michigan
Traffic Accident Reconstruction, Northwestern University Traffic Institute, 1997
ACTAR (#3330) Accredited Traffic Accident Reconstructionist, 2017
Engineering Dynamics EDSMAC Simulations Course, 1990
Engineering Dynamics HVE Simulations Forums 2002, 2006, 2007, 2011, 2013, 2014, 2015, 2018, 2019

Senior Engineering Consultant
> Design Research Engineering
> 2018 to Present

Senior Project Engineer,
> Design Research Engineering
> 1996 to 2018

Senior Engineer,
> Failure Analysis Associates
> 1989 to 1996

Publications

"Seat Belt Retractor Performance Evaluation in Rollover Crashes," SAE 2005-01-1702 (with M. Klima and D. Toomey).

"Seat Belt Buckle Performance in High Energy Wheel-to-Ground Impacts," SAE 2005-01-1709 (with M. Klima and D. Toomey).

Guest Lecturer

"Occupant Motion in Traffic Accidents." Michigan Association of Traffic Accident Investigators Fall Conference. Sterling Heights, MI, October 3, 2003.

"Seat Belt Buckle Performance in High Energy Wheel-to-Ground Impacts," Society of Automotive Engineers, 2005 World Congress, Detroit, MI, April 2005.

Additional Education

SAE Accessing and Interpreting Heavy Vehicle Event Data Recorders, SAE Course ID C1022

SAE Applying Automotive EDR Data to Traffic Crash Reconstruction, SAE Course ID C1210

Institute of Police Technology and Management (IPTM) Bosch CDR Tool Technician Training, Course #02 127 4002

Professional Affiliations
Member, Society of Automotive Engineers

Member, National Association of Professional Accident Reconstruction Specialists

Past Member, SAE Congress Accident Reconstruction and Occupant Restraints Review Committees