Boster, Kobayashi & Associates

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THOMAS A. BRAUN, P.E.

Curriculum Vitae

EDUCATION:

B.S. Mechanical/Aeronautical Engineering, University of California, Davis 1987

PRESENT POSITION:

Boster, Kobayashi & Associates, Livermore, CA: 1993 - Present

A consulting firm specializing in the technical aspects of accident reconstruction, failure analysis, highway design and injury causation. Typical assignments involve application of laws of physics and principles of engineering to vehicular accident reconstruction and product design/defect analysis.

Has analyzed over 2000 cases and provided testimony regarding:

Accident reconstruction (including cars, trucks, trailers, buses, motorcycles, ATV's, bicycles, pedestrians, heavy equipment, forklifts, scissorlifts, pallet trucks)
Brake systems (hydraulic, electric and air brake systems)
Occupant kinematics and restraint system analysis
Human factors (perception/reaction, visibility)
Product design/defect analysis, machine guarding, safety and warnings
Scaffolding and ladders
Sound levels

REGISTRATION:

Registered Professional Mechanical Engineer
State of California
Certificate Number M 028822

PROFESSIONAL SOCIETY MEMBERSHIPS:

Tau Beta Pi National Engineering Honor Society
Society of Automotive Engineers
American Society of Mechanical Engineers
Society of Forensic Engineers and Scientists

PREVIOUS POSITIONS:

Allied Signal Aerospace Company, Torrance, CA: 1988 - 1993

Senior Development Engineer. Participated in the design and development of electro-mechanical actuation systems. Supervised and performed detail design and analysis of geartrains, transmission systems, and electric motor drives, including stress, controls,
thermal, and reliability aspects. Developed proposal and product layouts. Analyzed and dispositioned non-conforming hardware. Conducted qualification test programs to verify compliance with customer requirements.

Lawrence Livermore National Laboratory, Livermore, CA: 1986

Engineering Assistant. Assisted in the development of synchrotron radiation lab test facility. Assembled, programmed, and tested a three-axis indexing system used for beamline positioning. Held Department of Energy security clearance.

AWU Honors Undergraduate Fellowship, LLNL, Livermore, CA: 1984 - 1985

Investigated material strength properties of polymer microspheres at cryogenic temperatures. Conducted high-pressure testing and scanning electron microscope analysis of test specimens.

SPECIALIZED TRAINING AND EXPERIENCE:

FARO Laser Scanning – Focus 3D and SCENE Software Training - 2014

Essentials of PC-Crash - 2011

Accessing and Interpreting Heavy Vehicle Event Data Recorders – 2010
Society of Automotive Engineers

Crash Data Retrieval System Technician and Data Analyst Certification Course – 2008

Vehicle Dynamics & Handling Seminar – 2006
Infineon Raceway, Sonoma, CA

The Role of Warnings and Instructions – 2006

Dept. of Engineering, University of Wisconsin – Madison
Hazard analysis, design and development of warnings and instructions, standards, assessing the effectiveness of warnings

Vehicle Dynamics & Handling Seminar – 2005
ESPN Russell Racing Schools – Infineon Raceway, Sonoma, CA

DDEC Reports/Data Extraction – 2004
Detroit Diesel Corporation, Detroit, MI
Trained to perform data extraction and analysis for the Detroit Diesel Electronic Controls (DDEC) system data recording devices, including the use of DDEC Reports and Detroit Diesel Diagnostic Link (DDDL) software.

Crash Data Retrieval System Operator Certification – 2004

PC-CRASH Advanced Workshop - 2003

PC-CRASH/PC-RECT Training Seminar – 2002
Trained in the use of 2D/3D accident reconstruction simulation software (PC-CRASH) and photogrammetry software (PC-RECT).

Crash Data Retrieval System Training Seminar– 2001
Vetronix Corporation

SPECIALIZED TRAINING AND EXPERIENCE: (continued)

SAE 2001 World Congress
Detroit, MI
Attended technical sessions on Vehicle Dynamics & Simulation, Biomechanics, Safety Test Methodology, Side Impact, Rear Impact and Rollover.

HVE Forum - 2000
Engineering Dynamics Corporation
HVE-2D (**H**uman-**V**ehicle-**E**nvironment) is a computer simulation environment for studying interactions between vehicles and their environments. HVE-2D allows the user to create models of vehicles and environments and study their interaction using HVE-2D compatible reconstruction and
simulation models. Workshops attended:

Theoretical and Applied Vehicle Dynamics Part 1 and 2 (Vehicle Dynamics and Accident Reconstruction) – topics included tire mechanics, vehicle dynamics, dynamic/transient handling models

EDCRASH for HVE-2D – (**E**ngineering **D**ynamics **C**orporation **R**econstruction of **A**ccident **S**peeds on the **H**ighway)

EDSVS & EDVTS for HVE-2D – (**E**ngineering **D**ynamics **C**orporation **S**ingle **V**ehicle **S**imulator and **V**ehicle **T**railer **S**imulator

Advanced HVE-2D Parts I to IV – advanced case study including use of EDCRASH, EDSMAC, EDSVS, environments, friction zones

Introduction to Elevators and Escalators – 1997
American Society of Mechanical Engineers
Design and operation of elevators and escalator systems, including electric elevators, hydraulic elevators for freight and passenger applications, and escalators.

Elevator Maintenance Evaluation – 1997
American Society of Mechanical Engineers
Procedures and methods for evaluating elevator maintenance, elements of accepted maintenance practices, preventive maintenance procedures, and evaluation of electrical and mechanical components.

SPECIALIZED TRAINING AND EXPERIENCE: (continued)

Biomechanics of Injury Causation - 1994
University of Northern California
A two day workshop presenting the biomechanics of injury causation and emerging issues in biomechanics. Topics included injuries of the head, neck, spine & brain, and analysis of restraint
systems, air bag injuries, and low-speed rear-end impacts.

Automotive Technology: Brake Systems and Safety - 1994
Los Positas College, Livermore, CA
Study of brake system theory and braking systems on cars. Repair and adjustment of complete systems and components.

Total Quality Leadership Training - 1992
Allied Signal, Torrance, CA
Trained in the use of total quality tools as a means to reduce product defects, increase productivity, improve customer satisfaction, and reduce cycle times.

Industrial Hydraulics Technology - 1991
National Technology Transfer Inc., Denver, CO
A twenty-one hour course in the design, analysis, and application of hydraulic components and systems.

PUBLICATIONS AND PRESENTATIONS:

"Black Box Update – EDR's, 49 CFR Part 563, and the CDR System", Caltrans Tort Workshop, May 2014

"Accident Reconstruction Issues in Commercial Vehicle Accidents", California Trucking Association, Northern Safety & Maintenance Management Council, April 2010

"Black Box Update", Society of Forensic Engineers & Scientists, September 2007

"Accident Reconstruction and Vehicle Dynamics Analysis Using EDR Data",
CAOC College of Trial Arts Vehicle Dynamic and Handling Seminar, August 2006

"Analysis of Vehicle Dynamics and Applications in Accident Reconstruction",
CAOC College of Trial Arts Vehicle Dynamics and Handling Seminar, August 2005

PUBLICATIONS AND PRESENTATIONS: (continued)

"Forensic Investigations of Automobile Accidents", Claims Conference of Northern California, Sacramento, 14 September 2004

"EDR Use in Motor Vehicle Accident Reconstruction", Hawaii Claim Association Annual Seminar
Hawaii, 17 September 2004

Braun, T.A. "Hit From Behind", Best's Review, October 2002

Braun, T.A. "The Black Box Knows", Best's Review, October 2002

Braun, T.A. et al. "Rear-End Impact Testing with Human Test Subjects", SAE 2001-01-0168 (Also presented at SAE 2001 World Congress, March 6, 2001)

"Experiencing Low Speed Rear-End Impact Tests", American Academy of Forensic Sciences, 52nd Annual Meeting, Reno, 24 February 2000.

"Scalded to Death in a Spa", American Academy of Forensic Sciences, 50th Annual Meeting, San Francisco, 12 February 1998.