



CURRICULUM VITAE
EDWARD C. FATZINGER, JR., MS, PE

SPECIALIZATION

- Accident Reconstruction
- Computer Simulation and Animation
- Vehicle Dynamics and Loss of Control
- Mechanical Failure Analysis
- Traffic Signal Analysis
- Visibility Studies
- Re-enactments
- Crash Data Recorder

EDUCATION

- Master of Science in Aerospace Engineering (MSAE)
Graduate Teaching Assistant
Embry-Riddle Aeronautical University (2001)
- Bachelor of Science in Mechanical Engineering (BSME)
West Virginia University (1997)

REGISTRATION

- Registered Professional Engineer, California Number M32561
- Accreditation Commission for Traffic Accident Reconstruction (ACTAR), No. 2161

CERTIFICATIONS

- ASE - Suspension and Steering
- ASE – Brakes
- CDR–Technician
- CDR– Data Analyst

ADDITIONAL TRAINING

- ARC-CSI Crash Conference, June 2012, 2013, 2015, 2016
- CDR Users Summit, January 2010, 2011, 2012, 2013, 2014, 2015
- SAE Course, Accessing and Interpreting Heavy Vehicle Event Data Recorders, 2011
- ARC-CSI Crash Conference, May 2010
- SATAI Summer Conference, July 2009
- ARC-CSI Crash Conference, June 2009
- CDR Technician Certification Course, April 2009
- CDR Data Analyst Certification Course, April 2009
- SATAI Summer Conference, July 2007
- ARC-CSI Crash Conference, June 2007
- Detroit Diesel DDEC Reports & Data Extraction, December 2006
- SATAI Summer Conference, July 2006
- ARC-CSI Crash Conference, June 2006
- SATAI Summer Conference, July 2005
- SATAI Spring Conference, March 2005
- CDR Operator Certification Course, October 2004
- ARC-CSI Crash Conference, June 2004
- SATAI Summer Conference and Test Crash, July, 2003
- UCR Tire Failure Analysis in Traffic Accident Investigations 2003

- SATAI Spring Conference, March 2001, 2002, 2003, 2005
- SATAI Summer Conference, July 2001, 2002
- SAE Course, Tire and Wheel Safety Issues, October 2002
- SAE Course, The Tire as a Vehicle Component, September 2002
- SATAI Fall Conference, November 2001
- IPTM Investigation of Motorcycle Accidents, July 2001
- Lawyers and Judges Accident Reconstruction and Litigation Seminar, February 2001

PROFESSIONAL EXPERIENCE

- 2008 to present **MOMENTUM ENGINEERING CORP.**
Senior Forensic Engineer
Accident reconstruction and investigation of heavy truck, automobiles, bicycles and pedestrian collisions. Involved in vehicle crash testing and accident re-enactment. Multiple vehicle and site inspections involving laser measurement. Extensive use of computer-based analysis, as well as momentum and energy based equations.
- 2001 to 2008 **VECTOR SCIENTIFIC, INC.**
Senior Forensic Engineer
Accident reconstruction and investigation of vehicular collisions. Performed vehicle crash testing and research. Analysis of mechanical failures and collision dynamics.
- 2001 **KNOTT LABORATORY, INC.**
Forensic Engineer
Accident reconstruction and investigation of vehicular collisions. Performed vehicle and scene inspections. Analysis of mechanical failures and collision dynamics.
- 2000 **EMBRY-RIDDLE UNIVERSITY**
Laboratory Instructor
Taught senior level laboratory class dealing with strain gages, accelerometers, piezoelectric transducers, instrumentation, etc. Responsible for all instruction including lesson planning, writing procedure and grading of assignments.
- 2000 (Summer) **JIM WALKER HONDA**
Motorcycle Mechanic
Performed various motorcycle repair and maintenance tasks, including periodic service, insurance repair, engine and driveline repair and new bike test rides.
- 1999 (Fall) **EMBRY-RIDDLE UNIVERSITY**
Laboratory Instructor
Responsible for instructing students in destructive and nondestructive testing of metals and composites. Planned lessons, graded assignments and conducted undergraduate lecture and research.

- 1997 – 1999 WELDSHIP CORPORATION
Test Engineer
Responsible for Acoustic Emission (AE) testing, ultrasonic testing (UT) and hydrostatic testing of DOT compressed gas cylinders for use on commercial trucks. Obtained ASNT Level II AE and UT certifications. Involved in the structural design and testing of American Bureau of Shipping (ABS) certified ISO containers.
- 1989 – 1997 FATZINGER’S AUTO SALVAGE
Mechanic
Responsible for all vehicle repair and maintenance. Involved in collision restoration, including bodywork and frame straightening.
Also involved in recycling, including vehicle stripping, and crushing.
Operated heavy equipment; front-end loader, backhoe, tractor-trailer and crushing equipment. Responsible for vehicle hauling and towing.

TECHNICAL BACKGROUND

Accident Reconstruction:

Collision analysis, scene investigation and drawings, skid analysis, crush analysis, photography, vehicle inspection, velocity/damage analysis and vehicle dynamics. Reconstruction of vehicular and motorcycle accidents. Computer-based accident reconstruction using PC Crash. Computer-based photographic analysis, including scanning and analyzing in Photoshop and Photomodeler to analyze skid and crush patterns. Brake, transmission and suspension failure. Vehicle dynamics testing.

Automotive:

Brakes, steering, engines, cooling systems, clutches, transmissions, drive train, suspension, frame, body structure repair.

Computer and Classical Analysis:

Computer-based accident reconstruction, finite element modeling, stress, vibration, acoustics, fatigue, buckling, creep, nondestructive testing and kinematics.

Design Evaluation:

Mechanical systems and components, material selection, load capabilities, performance evaluation.

High Performance Driving:

Raced street stocks for three years.
Raced flat track motorcycles for five years.

ORAL PRESENTATIONS

Fatzinger, E.C., E.v.K. Hill, “Low Proof Load Prediction of Ultimate Strengths of Fiberglass/Epoxy I-Beams Using Acoustic Emission,” ASNT Spring Conference and 11th Annual Research Symposium, Portland, Oregon - March 2002

Fatzinger, E.C., E.v.K. Hill, “Low Proof Load Prediction of Ultimate Strengths of Fiberglass/Epoxy I-Beams Using Acoustic Emission,” ASNT Spring Conference and 10th Annual Research Symposium, Denver, Colorado - March 2001

PUBLICATIONS

Fatzinger, EC, Landerville JB, “An Analysis of EDR Data in Kawasaki Ninja 300 (EX300) Motorcycles,” SAE Publication 2017-01-1436.

Fatzinger, EC, Shaw TL, Landerville JB, “The Effects of Power Interruption on Electronic Needle-Display Motorcycle Speedometers,” SAE Publication 2016-01-1474.

Landerville JB, Fatzinger EC, Wang PS. “Disputed Red Light accidents: A primer on signal control” (Advocate Article). Published by Consumer Attorneys Association of Los Angeles, November, 2009.

Raymond DE, Fatzinger EC, Connors TJ, Wheeler JB. Occupant Kinematic Analysis of an Unbelted Minivan Passenger: A Free Body Approach. *Proceedings of the International Society of Biomechanics XXth Congress and the American Society of Biomechanics 29th Meeting*, Cleveland, Ohio, August, 2005.

PROFESSIONAL AFFILIATIONS

- Society of Automotive Engineering
- American Society of Mechanical Engineering
- Southwest Association of Technical Accident Investigation
- American Motorcycle Association

AWARDS AND ACCOMPLISHMENTS

- Pi Tau Sigma, Honorary Fraternity of Mechanical Engineers
- Tau Beta Pi, National Honor Society of Engineers
- Secretary, American Society of Nondestructive Testing Central Florida Section, 2000
- President’s Advisory Board, Embry-Riddle Aeronautical University