

DON C. STEVENS

Severe Crash Analysis & Reconstruction , LLC
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EDUCATION

Master of Science in Mechanical Engineering

University of Oklahoma, Norman, Oklahoma, 1993

Bachelor of Science in Mechanical Engineering

Oklahoma State University, Stillwater, Oklahoma, 1991

EXPERIENCE

Automotive Safety Engineer

Severe Crash Analysis & Reconstruction, Chandler, Arizona, July 2016 to present.

Safety Engineering & Forensic Analysis, Phoenix, Arizona, January 1998 to June 2016.

Arndt & Associates, Tempe, Arizona, January 1996 to January 1998.

- Reconstruction of evidence and events in planar collisions and rollover accidents.
- Photogrammetric measurement and reconstruction of lost and undocumented evidence at collision sites.
- Analysis of collision dynamics and vehicle handling characteristics.
- Computer simulation of vehicle handling and collision events.
- Inspection, mapping, and evidence preservation of collision scenes and accident vehicles.
- 3D modeling of accident and exemplar vehicles.
- Determination of cause and origin in automotive fires.
- Full scale testing of vehicle collisions and vehicle components.
- Speed, position, and elapsed-time determination using surveillance video.

Applications Development Engineer

Simula, Inc., Phoenix, Arizona, May 1993 to January 1996

- Led an 18 month study and compilation of results for crash safety analysis of light truck fuel systems.
- Reconstructed single and multiple vehicle crashes.
- Coordinated dynamic testing of anthropomorphic test dummies and seating systems.
- Worked to develop new side-impact air bag technologies.
- Earned U.S. patent for development of fiber-optic strain gauge devices.
- Received U.S. government security clearance for access to classified documents and research.

CONTINUING EDUCATION

- World Reconstruction Exposition, May 2016
- Southwest Association of Technical Accident Investigators Conference, September 25, 2014.
- Bosch Crash Data Retrieval System Operator & Analyst Certification, July 2008
- Crash Data Retrieval Tool User's Conference, January 2008
- Vetronix Crash Data Retrieval System Technician and Data Analyst Certification, October, 2005
- Vehicle Steering Robot Programming and Operation, AB Dynamics, London, England, April 2005
- Passenger Vehicle Rollover TOPTEC: Causes, Prevention, and Injury Prevalence, SAE, April 2002
- Accident Reconstruction with M-SMAC , McHenry Software, November 2000
- Automotive Vehicle Dynamics, SAE, October 1999
- Computer Analysis of Vehicle Suspension Systems, SAE, March 1999
- Biomechanics of Impact Trauma, AAAM, IRCOB, October, 1996
- Bob Bondurant's School of High Performance Driving, November, 1996.
- Crash Safety and Investigation, ICSE, September, 1994

PROFESSIONAL AFFILIATIONS

Society of Automotive Engineers, member and International Congress Technical Paper Review Committee
Association for the Advancement of Automotive Medicine, Membership & Credentials Committee chairman
National Association of Professional Accident Reconstruction Specialists (NAPARS)

PUBLICATIONS

"Remote Controlled Vehicle Crash Testing Applied to Advanced Reconstruction of Rollover Accidents", three presentations to over 600 law enforcement and private accident reconstructionists during World Reconstruction Exposition, Orlando, Florida, May 2016.

Tire Defect Litigation, Chapter 12, "The Importance of Accident Reconstruction in Tire Litigation.", Lawyers & Judges Publishing Company, Inc., 2016.

"Rollover Accident Reconstruction and Application of Crash Test Data", presentation at the Southwest Association of Technical Accident Investigators Conference, September 25, 2014.

"Vehicle Rollover Crash Testing Applied to Accident Reconstruction", presentation to Arizona Law Enforcement agencies, August 21, 2013

"Comparison of Linear Variable Deceleration Rate Rollover Reconstruction to Steer-Induced Rollover Tests." SAE paper 2012-01-0469. Published and presented at SAE 2012 World Congress & Exposition, April 24-26, 2012.

"Drag Factors from Rollover Crash Testing for Crash Reconstructions." IMECE2011-65537. Presented at the ASME 2011 International Mechanical Engineering Congress & Exposition, Denver, Colorado, November 11-17, 2011.

"Rollover Crash Test Results: Steer-Induced Rollovers", SAE paper 2011-01-1114. Published and presented at SAE 2011 World Congress & Exhibition, Detroit, Michigan, April 2011.

Invited speaker and instructor at Tucson Police Department Training Center, Tucson, Arizona, November, 2009. Title of publication and presentation: "Reconstruction of Vehicle Rollovers Due to Tire Failure".

"Test Results: Ford PCM Downloads Compared to Instrumented Vehicle Response in High Slip Angle Turning and other Dynamic Maneuvers", SAE paper 2009-01-0882. Published and presented at 2009 SAE International Congress and Exhibition, Detroit, Michigan, April 2009.

Invited speaker and instructor at Southwest Association of Technical Accident Investigators (SATAI) conference, San Diego, California, November, 2007. Titles of publications and presentations: "The Effect of Tire Tread Separation on Vehicle Handling in Full Scale Vehicle Testing" and "Passenger Vehicle Rollover Reconstruction – Investigation and Analysis".

"Analysis of Causes of an Unintended Rollover During a Tread Separation Event Test," ICRASH Conference, Athens, Greece, July 2006.

"Analyzing the Trip-Phase of Soft-Soil Rollovers", SAE paper 2006-01-1558. Published and presented at 2006 SAE International Congress and Exhibition, Detroit, Michigan, April 2006.

"Force Response During Tire Tread Detachment Event", SAE paper 2004-04-1075. Published and presented at 2004 SAE International Congress and Exhibition, Detroit, Michigan, March 8-11, 2004.

Invited speaker and instructor to the Mesa Arizona Traffic Crimes Unit and Arizona Traffic Investigators Association, August 2003. Titles of publications and presentations: "Passenger Vehicle Rollover Reconstruction – Investigation, Analysis, and Presentation of Results" and "Effects of Tire Disablement on Vehicle Handling".

"The Importance of Dynamic Testing in Determining the Yaw Stability of Vehicles" Published and presented at the 18th International , Technical Conference on the Enhanced Safety of Vehicles, Nagoya, Japan, May 2003.

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Invited speaker and instructor at Southwest Association of Technical Accident Investigators (SATAI) conference, Las Vegas, Nevada, March 2003. Titles of publications and presentations: "Effects of Tire Disablement on Vehicle Handling" and "Passenger Vehicle Rollover Reconstruction – Investigation, Analysis, and Presentation of Results".

Invited speaker and instructor at SAE technical course "Passenger Vehicle Rollover TOPTEC: Causes, Prevention, and Injury Prevalence", April 2002. Title of publication and presentation: "Passenger Vehicle Rollover Reconstruction – Investigation, Analysis, and Presentation of Results".

"The Motor Vehicle in the Post-Crash Environment, An Understanding of Ignition Properties of Spilled Fuels", Published and presented at the 1999 SAE International Congress and Exhibition, Detroit, Michigan, March 1999.

"Development of a Novel Low-Cost Fiber-Optic System for Structural Applications," Published and presented at the Society of Photo-Optical Instrumentation Engineers conference, San Diego, CA, March 16, 1996.

"Development of a Novel Fiber-Optic Strain Sensor System for Long-Term Monitoring of Highway Structures," NCHRP-IDEA Project 24, August, 1995.

"An Interactive Model Generator/Preprocessor for Multidisciplinary Optimization of Aircraft," Fifth AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization, Ft. Lauderdale, FL, November 12, 1994.

PATENTS

United States Patent no. 5,649,035 "Fiber Optic Strain Gauge Patch," July 15, 1997