



KITTELSON LLC

FORENSIC TRANSPORTATION ENGINEERING

JAMES R. LOCK
SENIOR PRINCIPAL

FORMAL EDUCATION

B.S. in Political Science, General Engineering Minor, Texas A&M University, 1987

MEMBERSHIPS AND LICENSES

Society of Automotive Engineers (SAE) (1977 - Present)
Texas Association of Accident Reconstructionists (TAARS)
Institute of Transportation Engineers
American Society of Civil Engineers
European Association for Accident Research and Analysis
National Association of Professional Accident Reconstruction Specialists
Texas DPS Licensed Private Investigator
Texas Commission on Private Security – Private Investigations Company (Class A) license A09712
Fellow: The American Board of Forensic Examiners

- Board Certified Forensic Examiner (1994 – 2004)

Member - National Research Council (1983 - 1992)

- Transportation Research Board
- Motorcycle and Moped Committee, TRB A3B14

EXPERIENCE

| | |
|----------------|--|
| 2018 – Present | Senior Principal, Kittelson LLC |
| 1991 – 2018 | Traffic Accident Reconstructionist and Highway Safety Expert, Collision Research Associates |
| 1982 – 1994 | Traffic Accident Reconstructionist and Highway Safety Expert, Scientific Inquiry, Inc. |
| 1986 – 1992 | Assistant Research Scientist, Texas Transportation Institute, Texas A&M University |
| 1983 – 1986 | Program Manager, Accident Investigation and Reconstruction Program, Accident Analysis Division, Texas Transportation Institute, Texas A&M University |
| 1980 – 1983 | Research Associate, Texas Transportation Institute, Texas A&M University |
| 1977 – 1980 | Highway Safety Specialist, Texas Transportation Institute, Texas A&M University |
| 1975 – 1977 | Instructor, Texas Transportation Institute, Texas A&M University |
| 1970 – 1975 | Automobile Service Manager and Mechanic |
| 1969 – 1970 | Automotive Paint and Body Service Technician |
| 1966 – 1969 | Motorcycle Mechanic |

TECHNICAL TRAINING, SYMPOSIUM PARTICIPATION, AND TEACHING EXPERIENCE (partial listing)

- **World Reconstruction Exposition**
Presented by 21 Reconstruction Associations, Orlando, Florida, May 2016
- **Reconstruction and Analysis of Motorcycle Crashes**
Society of Automotive Engineers, Mesa, Arizona, November 2015
- **Digital Forensics of Heavy Vehicle Event Data Recorders**
The University of Tulsa, Oklahoma City, Oklahoma, June 2015
- **2015 HVE Computer Simulation Forum**
Engineering Dynamics Corporation, Austin, Texas, March 2015
- **FARO Focus 3D**
FARO 3D Point Cloud Scanner and Software Training, Dustin Productions LLC, College Station, Texas, January 2014
- **Texas Association of Accident Reconstruction Specialists**
Instrumented Crash Tests, Braking Systems, Product Liability Issues, CVM Inspection Issues, Vericom Systems, Forensic Uses of GPS Systems, Presentation of Crash Data, Fort Worth, Texas, May 2012
- **Advanced Crash Reconstruction—Utilizing Human Factors Research**
Northwestern University Center for Public Safety, Evanston, Illinois, March 2012
- **Motorcycle Crash Investigation**
Presented to the 2012 Motorcycle Safety Forum – Texas Transportation Institute - Center for Transportation Safety, Texas Department of Transportation, Texas Department of Public Safety, Bryan, Texas, February 2012
- **ARAS 360 Advanced 3D Computer Diagramming for Crash Reconstruction**
ARAS Software, Belton, Texas, June 2011
- **REC-TEC TRUCK 2011**
Michigan State University, College of Engineering, Highway Traffic Safety Program Department of Civil and Environmental Engineering, New Orleans, Louisiana, March 2011
- **1st Joint ITAI – EVU Conference and ITAI EVU Test Day at the MIRA Proving Ground**
The Institute of Traffic Accident Investigators – Europäische Vereinigung für Unfallforschung und Unfallanalyse e.V. (European Association for Accident Research and Analysis), Hinkley, United Kingdom, September 2009
- **High Performance Driving School**
Skip Barber Racing School, Mazda Raceway Laguna Seca, Monterey, California, June 2009
- **Motor Vehicle Accident Reconstruction: Theory and Practice**
Canadian Association of Technical Accident Investigators and Reconstructionist (CATAIR) and, International Association of Accident Reconstruction Specialists, Vancouver, BC, July 2008
- **2007 HVE Computer Simulation Forum**
Engineering Dynamics Corporation, San Antonio, Texas, February 2007
- **CDR/EDR User's Summit**
Collision Safety Institute and The ARC Network, Houston, Texas, 2007, 2008, 2009, 2012, 2014, 2017
- **Advanced Vehicle Dynamics for Passenger Cars and Light Truck**
Society of Automotive Engineers Professional Development Program, Troy, MI, December 2005
- **Internationale Automobil–Asstellung (IAA)**, Association of the Automotive Industry (VDA), Frankfurt/Main, Germany, September 1994, September 1995, September 2015
- **Vehicle and Occupant Kinematics in Rollovers**

- Society of Automotive Engineers Professional Development Program, Detroit, MI, April 2005
- **Accident Reconstruction and Computer Simulation using MSMAC**
McHenry Software, Inc. Cary, North Carolina, April 2003
 - **Vehicle Dynamics for Passenger Cars and Light Trucks**
Society of Automotive Engineers Professional Development Program, Detroit, MI, March 2001
 - **Private Investigators Continuing Education**
Connelly and Associates, Bedford, Texas, February 2001, February 2003
 - **Skills and Techniques for Advanced Riding**
College Station, Texas, October 1999, April 2000
 - **Passenger Car Rollover TOPTEC: Cause and Prevention**
Society of Automotive Engineers Topical, Technical Workshop & Professional Development Program, San Diego, California, Jan 1999.
 - **Reconstruction Technologies 3rd Annual Advanced Training Seminar**
REC-TEC Software and Accident Reconstruction, Cocoa Beach, Florida, July 1998
 - **Perception, Reaction, Conspicuity Seminar**
Human Factor Issues in Accident Reconstruction, University of Iowa, Iowa City, Iowa, November 1997
 - **36th Annual Workshop on Transportation Law**
Presentation participant in a Mock Trial on Tort Issues, Transportation Research Board, Annual Workshop on Transportation Law, Chicago, Illinois, July 1997
 - **Low Speed Collision TOPTEC**
Society of Automotive Engineers Topical, Technical Workshop - Continuing Education Seminar, Richmond, BC, Canada, August 1996
 - **Motorcycle Accident Reconstruction**
Short Courses developed and taught for The Texas A&M University System, Texas Engineering Extension Service, College Station, Texas, May 1986 through May 1990
 - **Biomechanics of Motor Vehicle Accidents**
Short Course developed and taught for The Texas A&M University System, Texas Engineering Extension Service, College Station, Texas, July 1994
 - **Mechanics of Heavy Duty Trucks and Truck Combinations**
The University of Michigan, Transportation Research Institute, Continuing Engineering Education Professional Development Program. Ann Arbor, Michigan, July 1994
 - **Traffic Accident Investigation and Reconstruction Training**
Two-week course developed and presented to the Dubai Police General Headquarters, Dubai, United Arab Emirates, September 1993
 - **The Acquisition and Utilization of Tire-Pavement Friction in the Reconstruction of a Motor Vehicle Collision**
An invited lecture given at the Second Traffic Symposium, Dubai, United Arab Emirates, February 1993
 - **Personal Injury Insurance Fraud Investigation & Expert Witness Requirements and Laws**
Texas Association of Accident Reconstruction Specialist, Houston, Texas, October 1991
 - **Tools and Techniques for Motorcycle Collision Reconstruction**
Short Course developed and taught for the University of North Florida, Institute of Police Technology and Management, Jacksonville, Florida, April 1991
 - **International Motorcycle Safety Conference, The Human Element**
Orlando, Florida, November 1990
 - **Tire/Roadway Friction & Drag Sled Testing:**
Texas Association of Accident Reconstruction Specialist, College Station, Texas, November 1990

- **Tire Pavement Friction - an Overview of Properties and Relationships**
Short Course developed and taught for the University of North Florida, Institute of Police Technology and Management, Jacksonville, Florida, April 1990
- **Special Problems in Traffic Accident Reconstruction**
University of North Florida, Institute of Police Technology and Management, Jacksonville, Florida, April 1990
- **Tire Failure Seminar**
Criminal Justice Academy, The Texas A&M University System, College Station, Texas, January 1990
- **Investigation of Motorcycle Accidents**
Institute of Police Technology and Management, University of North Florida, Grand Prairie, Texas, March 1989
- **Brakes: Design and Safety**
Society of Automotive Engineers Continuing Education Seminar, Orlando, Florida, October 1988
- **Inspection of Commercial Vehicles in Accidents**
Institute of Police Technology and Management, University of North Florida, Tucson, Arizona, March 1988
- **Investigation of Commercial Vehicles Accidents:**
Institute of Police Technology and Management, University of North Florida, Tucson, Arizona, March 1988
- **Accident Reconstruction and Analysis**
Institute of Transportation Engineers and Northwestern University, Dallas, Texas, November 1985
- **National Accident Sampling System Update**
Southwest Research Institute, San Antonio, Texas, November 1981
- **Advanced Accident Reconstruction:**
University of Michigan, Highway Safety Research Institute, Ann Arbor, Michigan, May 1979
- **Special Interest Accident Reconstructions – Motorcycle Collisions and Automobile Side Impact Collisions**
University of Michigan, Highway Safety Research Institute, Ann Arbor, Michigan, April 1978
- **Management of Accident Research Teams**
Allen Corporation and NHTSA, Washington, D.C., March 1978
- **Advanced Motor Vehicle Accident Investigation**
U.S. Department of Transportation, NHTSA, Washington, D.C., February 1978
- **Accident Investigation Field Techniques**
Indiana University, Institute for Research in Public Safety and NHTSA, Bloomington, Indiana, December 1977
- **National Accident Sampling System Introductory Accident Investigation Training**
Allen Corporation and the National Highway Traffic Safety Administration, U.S. Department of Transportation, Washington, D.C., Nov 1977
- **High Performance Vehicle Operation Training**
Taught for the Texas Transportation Institute, Texas A&M University System, August 1975 – August 1977
- **Automotive Service Short Courses**
Toyota, Mazda, General Motors, Ford, various dates and locations, 1971 – 1975

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) WORLD CONGRESS – TECHNICAL TRAINING, SHORT COURSE AND INTERNATIONAL SYMPOSIUM PARTICIPATION

- Occupant Protection: Accident Reconstruction, Detroit, MI, April 2011
- Accident Investigation and Reconstruction, Detroit, MI, April 2005
- Accident Reconstruction Technology and Animation XI, Detroit, MI, March 2001
- Truck & Bus Meeting and Exposition, Indianapolis, Indiana, November 1998
- Accident Reconstruction Technology and Animation VII, Detroit, MI, March 1997
- Accident Reconstruction Technology and Animation V, Detroit, MI, March 1995
- Accident Reconstruction Technology and Animation, Detroit, MI, March 1993
- Vehicle Dynamics and Rollover Propensity Research, Detroit, MI, February 1992
- Accident Reconstruction: Technology and Animation, Detroit, MI, February 1991
- Motor Vehicle Accident Reconstruction, Detroit, MI, February 1989
- Accident Reconstruction, State-of-the-Art, Detroit, MI, February 1988
- Automatic Occupant Protection Systems, Detroit, MI, February 1988
- Automobile Collision Analysis, and Accident Reconstruction: Automobiles, Tractor/Semi-trailers, Motorcycles and Pedestrians, Detroit, MI, February 1987
- Field Accidents: Data Collection, Analysis, Methodologies and Crash Injury Reconstruction Symposium, Detroit, MI, February 1985
- Advances in Belt Restraint Systems: Design, Performance and Usage, Detroit, MI, February 1984
- Pedestrian Impact Injury and Assessment, Side Impact Protection, Detroit, MI, February 1983
- Accident Investigation and Reconstruction Standards Committee, Detroit, MI, February 1977 – 2011

TECHNICAL PAPERS, PRESENTATIONS, AND REPORTS (partial listing)

Motorcycle Crash Investigation

Prepared for the Texas Transportation Institute at Texas A&M University under contract to the Texas Department of Public Safety, September 2010

Collision Reconstruction Reports

Prepared for a variety of clients on individual public roadway collisions, investigated and reconstructed to determine how and why the collision occurred, 1991 – Present

Occupant Restraint Systems; Design and Function

Developed for and presented at the Biomechanics of Motor Vehicle Accidents Short Course, Texas Engineering Extension Service, Texas A&M University, July 1994

Traffic Accident Investigation and Reconstruction

Prepared for and presented to the Dubai Police General Headquarters, Dubai Police College, Dubai, United Arab Emirates, with Lance Bullard, September 1993

The Acquisition and Utilization of Tire-Pavement Friction in the Reconstruction of a Motor Vehicle Collision

Prepared for and presented to the Dubai Police General Headquarters, Research & Studies Center. The Second Traffic Symposium, Dubai, United Arab Emirates, February 1993

Texas Skid Initiated Accident Reduction Program

Research Report 910-1F, Skid Accident Reduction Program Safety Recommendations H-87-2, Prepared for the Texas State Department of Highways and Public Transportation (TxDOT), with Don L. Ivey, Lance Bullard and Lindsay Griffin, III, August 1992

Tools and Techniques for Motorcycle Collision Reconstruction

Developed and presented to the Special Problems in Accident Reconstruction Seminar, Institute of Police Technology and Management, University of North Florida, Jacksonville, April 1991

Proposed Program to Reduce Skid Initiated Accidents in Texas

Program Development Report 9100-1, Skid Accident Reduction Program Safety Recommendations H-87-2, Prepared for TxDOT, with Don L. Ivey and Lindsay Griffin, III, August 1990

Motorcycle Accident Reconstruction

Training developed for and taught at the Texas Engineering Extension Service, Texas A&M University, May 1986 - May 1999

Tire-Pavement Friction: An Overview of Properties and Relationships

Developed and presented to the Special Problems in Accident Reconstruction Seminar, Institute of Police Technology and Management, University of North Florida, Jacksonville, April 1990

Rollover Caused by Concrete Safety Shaped Barrier: Volume II

Final report on contract DTFH61-85-00129 and FHWA-RD-88-220, for the Federal Highway Administration, U.S. Department of Transportation, with K.K. Mak and D.L. Sicking, January 1989

A Survey of Selected 1986 Motorcycle Fatalities in the State of Texas

With Sandra L. Parsons. TTI Report Number: TARE-82, January 1989

Heavy Truck Fuel System Integrity Study

Clinical In-Depth Case Study Reports generated for each investigated and reconstructed heavy truck crash with fuel loss or post-crash fire collision. Prepared for The Motor Vehicle Manufacturers Association, 1987 – 1988

Accident Investigation and Reconstruction of Air Bag Equipped Vehicles

Research and reports prepared for the National Highway Traffic Safety Administration, U.S. Department of Transportation, 1987-1991

In-Depth Investigation and Documentation of Vehicles with Alleged Safety Defect

Investigations conducted, and reports prepared for the U.S. Department of Transportation National Highway Traffic Safety Administration's Office of Defects Investigation, 1987-1992

Research, analysis and preparation of Highway Safety Technical Reports

Research and reporting on an annual basis for the State of Texas (TxDOT), 1984-1992

NHTSA Heavy Truck In-Depth Accident Investigation A Recommended Protocol For Program Initiation

Prepared for and presented to the U.S. DOT, National Highway Traffic Safety Administration, January 1988

Multidisciplinary Accident Investigation Teams - A Feasibility Study, Volume I Technical Report, Volume II Data Collection Forms and Manuals

Prepared for the Texas State Department of Highways and Public Transportation (TxDOT), with King K. Mak, August 1985

Pavement Condition Measurements for Safety Improvements

Final Report FHWA under Contract DTFH 61-82-C-00056, with Don L. Ivey, Alan S. Jones, Kirk E. Barnes, Olga J. Pendleton, and Ted Chira Chavala, June 1985. (Volumes 1 and 2)

Evaluation of Selective Traffic Enforcement Programs (STEPS) in Waco and Irving, Texas

Prepared for the Texas State Department of Highways and Public Transportation (TxDOT), with Olga J. Pendleton, November 1983

Surveys of Motorcycle Traffic at Selected Locations in Houston and Dallas, Texas

Prepared for the Motorcycle Safety Foundation, with Nancy Hatfield, December 1982

Evaluation and Documentation of the Procedures Generated by the State Accident Statistical System (SASS)

Prepared for the Texas State Department of Highways and Public Transportation (TxDOT), with Joseph La Belle and Sara Seely, April 1982

Documentation of Accident Investigation and Reconstruction on NASS Selected Cases

Collision reconstructions provided to the U.S. DOT, NHTSA. 1977-1981. Technical oversight provided and team management on NASS collision reconstructions, 1980-1986

Establishment of a National Accident Sampling System Team in Ashley, Chicot, Desha, Drew and Lincoln Counties, Arkansas

Prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, with John Cook, September 1980

Student's Guide to the Tx Transportation Institute School for High Performance Driving

Prepared for the HP Driving School Students at the Texas Transportation Institute, Texas A&M University, February 1976