



Steven Anderson

BASc PE

Senior Engineer

contact

✉ steven.anderson@meaforensic.com

📞 949.290.4081

📍 Los Angeles

expertise

Collision Reconstruction

areas of specialization

Accident Reconstruction

Motorcycle Accidents

Micromobility

Steve Anderson brings over 40 years of experience in forensic engineering and motorcycle design to his work as a senior engineer in MEA Forensic's Collision Reconstruction Group. He investigates all kinds of vehicle accidents but specializes in those involving motorcycles and other powersports vehicles. Steve routinely presents the results of his engineering investigations as an expert witness in court.

An MIT mechanical engineering graduate, Steve's life has been focused on motorcycles and two-wheel vehicles. He's ridden motorcycles for more than five decades, and was directly involved in the motorcycle industry for almost as long. Over the years, he's held positions as varied as Technical Editor of Cycle World Magazine, Chief Editor of Cycle magazine, Platform Director at Buell Motorcycles, Product Manager at Erik Buell Racing Motorcycles, and VP of Vehicle Engineering at Bond Mobility. Steve has been invited to present on two-wheel vehicle design and safety at the World Motorcycle Conference and at several International Micromobility conferences.

Steve has accumulated twenty years of experience in accident analysis and collision reconstruction, during which he has consulted on more than 1000 motorcycle cases and taught motorcycle accident reconstruction courses. His experience in riding and designing motorcycles combined with his accident investigation expertise makes him truly unique among his peers. When clients hire him, they can expect a thorough, unbiased examination of their case, and a skilled communicator. When he testifies as an expert witness, Steve presents his findings in terms that everyone can understand, drawing on his years of experience as a contributing editor with commercial magazines.

As a platform director and VP of vehicle engineering, he led engineering teams in developing new bikes from concept to production and safety certification, and has patents on two-wheeled vehicle designs. "I have been involved in every aspect of the process, from engines to cooling systems to chassis to electrical systems and batteries", he points out. "I'm still following motorcycle technical development closely, and I am excited to see the rapid progress as the industry begins to transition from internal combustion to electric powertrains, and some of the safety benefits that will ensue."

education

Bachelor of Science, Mechanical Engineering, Massachusetts Institute of Technology, 1979.

professional status

Certified Instructor of the Motorcyclist Training Course, California Motorcyclist Safety Program, January 2022. Instructor number 10690.

Licensed Professional Engineer, State of Wisconsin, February 2012. License number 42195.

Licensed Professional Engineer, Washington State, December 2004. License number 41442.

professional associations

Society of Automotive Engineers (SAE), since 1979.

California Association of Accident Reconstruction Specialists (CAARS), since 2017.

Southwestern Association of Technical Accident Investigators (SATAI). Since 2018.

professional experience

MEA Forensic Engineers & Scientists

Senior Engineer, 2016 to 2019 and 2020 to present

Responsible for technical investigations, primarily those involving motor vehicle accident investigation and reconstruction. Specialized expertise in motorcycle design, behavior and operation. Has been qualified in civil and criminal courts as an expert witness with expertise in collision reconstruction, motorcycle design, and motorcycle rider behavior.

BOND Mobility, Zurich, Switzerland

VP of Vehicle Engineering, 2019 to 2020

Responsible for all aspects of the design of a new, high-performance e-bicycle intended for Bond Mobility rental fleet use in European cities such as Zurich, Helsinki, Munich, and Paris. Led a small team to create all aspects of the new bicycle, including chassis, electrical system, battery, motor, brakes, and software. Responsible for ensuring the new bicycle met US and European regulations and safety standards.

Erik Buell Racing LLC, East Troy, WI

Program Manager, 2012 to 2015

Responsible for all aspects of the design, testing, tooling, and homologation of a new serial-hybrid electric scooter for a large client motorcycle company. Designed the chassis, e-motors, hybrid manager software, range-extender engine, braking system, lighting systems, and suspension, to meet US federal and EU motor vehicle requirements such as FMVSS, EPA, and UN-ECE regulations. Also created designs for new classes of lightweight two-wheeled EVs, and designed brakes with enhanced performance for World Superbike racing motorcycles.

Safety Engineering Associates, Inc., Madison, WI

Mechanical Engineer, 2010 to 2012

Responsible for technical investigations, involving two- and four-wheel vehicle accidents, with a focus on vehicle design and failure analysis, including motorcycle stability and motorcycle rider behavior.

Cycle World Magazine, Newport Beach, CA

Contributing Editor, 2010 to 2013

Wrote articles about new motorcycle designs and new technology. Wrote overview article on electric two-wheeler design, and tested many new electric motorcycles.

Buell Motorcycle Company, East Troy, WI

Platform Director, 2005 to 2009

Led engineering teams for new motorcycle designs, with responsibilities from early concept through production, including meeting safety, durability, and government homologation requirements. Designed improved components, including aerodynamic bodywork, cooling systems, and brake systems, for Buell racebikes. Designed 12v lithium-ion start-battery, the first to be used in a serial-production motorcycle.

Orange County Business Bank, Newport Beach, CA

Organizer and Director, 2003 to 2009

MacInnis Engineering Associates, Lake Forest, CA

Senior Engineer, 2000 to 2005

Responsible for technical investigations involving motor vehicle collision reconstruction, failure analysis and research. Qualified in civil and criminal courts as an expert witness with expertise in collision reconstruction. Specialized expertise applied to motorcycle and ATV cases.

Cycle World Magazine, Newport Beach, CA

Contributing Editor, 1993 to 2005

Review motorcycle design and provided quantitative performance evaluations. Provide technical analysis of new motorcycle features and designs.

Vollmer-Gray Engineering Laboratories, Long Beach, CA

Staff Engineer, 1993 to 2000

Responsible for investigating, analyzing, and reconstructing traffic collisions for automotive, motorcycle, heavy truck, bus, and bicycle cases. Also involved in cases to evaluate mechanical failure, design, and motorcycle rider behavior.

Wheelbase Corporation, Paso Robles & Irvine, CA

Senior Vice-president, Editorial, 1991 to 1993

Partner in on-line start-up with automotive and motorcycle content. Evaluated new automobiles and motorcycles and contributed to design of delivery software.

Engineering Consultant, Self-Employed, Irvine, CA

Mechanical Engineer, 1991 to 1993

Performed collision reconstruction, design evaluation, and business analysis of the motorcycle industry. Evaluated automobile performance and handling.

Cycle Magazine, Westlake Village & Newport Beach, CA

Editor-in-Chief, 1988 to 1991

Directed editorial content and staff for the world's largest consumer motorcycle magazine. Reviewed motorcycle design and provided quantitative and subjective performance evaluations for almost all new motorcycle models sold in the United States. Provided technical analysis of new motorcycle features and designs.

Cycle Magazine, Newport Beach, CA

Technical Editor to Executive Editor, 1982 to 1988

Provided motorcycle design and subjective and quantitative performance evaluations. Designed test instrumentation to measure vehicle acceleration, braking, and top speed. Performed tests to measure qualities for new motorcycle design. Wrote technical articles to explain motorcycle design.

Williams International Corporation, Walled Lake, MI

Design Engineer & Senior Engineer, 1979 to 1982

Responsible for the design and analysis of components and systems for small gas turbine engines. Also performed stress analysis, failure analysis, and manufacturing studies.

Honda of Boston, Boston, MA

Motorcycle Mechanic, 1976 to 1977

research activities

Assisted in mechanical design of advanced PMAC transverse and radial flux e-motors for electric two-wheelers. Designed unique, ultra-light-weight electric two-wheelers, including constructing a running prototype.

Assisted in brake system design and calibration for production motorcycles. Designed a linked brake system to comply with advanced braking system requirements.

Designed, commissioned and finalized a speed measuring system including downloading and analysis software. This system was used to measure acceleration and braking performance of hundreds of motorcycles, many automobiles, and at least one aircraft – the Burt Rutan Voyager.

Performed hundreds of braking tests on most new street motorcycle models from 1982 to 1989.

Performed tests comparing motorcycle-braking performance versus rider skill level, including effects of brake system design on rider performance. Results of this testing were published in Cycle World.

Performed motor vehicle crash tests to validate engineering analysis of vehicle impact speeds determined from damage to the vehicles.

Performed review of non-staged motorcycle crashes to determine the nature of typical frame failures for motorcycles with aluminum frames.

lectures & presentations

January 31, 2019 – Safety for Micromobility, The Micromobility Conference, Bay Area, CA.

October 2, 2018 – Ultra-lightweight electric two-wheelers are the future; the future is now. 12th Annual International Motorcycle Conference, Cologne, Germany.

September 5, 2018 – Safety and Mobility, Micromobility Conference, 2018 Tech Festival, Copenhagen, Denmark.

May 10, 2018 – New Techniques in Motorcycle Accident Reconstruction, San Diego, CA.

September 6, 2017 – The Physics of Getting Around: Why Urban Transport is the Killer App for Electric Powertrains, Micro Mobility Conference, 2017 Tech Festival, Copenhagen, Denmark.

June 9, 2017 – Accident Reconstruction & Injury Biomechanics: From Black Box to Broken Bones, CAARS, 2nd Quarter Training – Northern California, Roseville, CA.

May 31, 2017 – Accident Reconstruction & Injury Biomechanics: From Black Box to Broken Bones, CAARS, 2nd Quarter Training – Southern California, Santa Ana Police Department, CA.

April 27, 2016 – Motorcycle Accident Reconstruction, Orange County Traffic Investigators Association – Irvine City Hall, Irvine, CA.

May 2005 – Motorcycle Braking and Accident Reconstruction, Orange County Sheriff's Department – Lake Forest, CA.

April 2005 – Using Published Motorcycle Data in Accident Reconstruction: Special Problems in Traffic Crash Reconstruction Conference, Institute of Police Technology and Management – University of North Florida, Jacksonville, FL.

October 28-30, 2004 – Motorcycle Accident Reconstruction, CAARS 2004 Conference, Santa Rosa, CA.

training and professional development

January 10-16, 2022 – Instructor of the Motorcyclist Training Course Certification, The California Motorcyclist Safety Program, San Bernardino, CA.

March 22-25, 2021 – iNPUT-ACE Video Evidence Symposium 2021, Online.

February 25, 2021 – PC-Crash Webinar Series 1 – Tips & Tricks, Online.

January 20-24, 2019 – Human Factors in Traffic Crashes – Analysis of Drivers' Responses, Crash Safety Solutions, Glendale, AZ.

October 1-2, 2018 – 12th Annual International Motorcycle Conference, Institute for Motorcycle Safety (IFZ Institute für ZWIERADSICHERHEIT), Cologne, Germany.

September 5-8, 2018 – 2018 Tech Festival: Where Humans and Technology Meet, Copenhagen, Denmark.

August 28, 2018 – SATAI Summer Conference: Kawasaki Motorcycle EDR (electronic data retrieval), Henderson North Community Police Station, Henderson, NV.

May 16, 2018 – Robert Bosch GmbH presentation on future electronic rider aids for motorcycles, Rennigen, Germany.

April 30, 2018 – Automated emergency brake (AEB) testing, Irvine, CA.

March 28, 2018 – Rail Safety Training Course, Los Angeles County Metropolitan Transportation Authority, Los Angeles, CA.

Oct 26, 2017 – Motorcycle Accident Reconstruction and Dynamics, CA2RS (California Association of Accident Reconstruction Specialists), Fall Conference – Anaheim, CA.

June 14-15, 2017 – Motorcycle Crash Testing, CAARS, Vallejo, CA.

July 11-15, 2016 – CDR Operators & Analysis and Applications, Manchester Police Department, Manchester, CT.

May 16-20, 2016 – Motorcycle Crash Reconstruction, WATAI, Tukwila, WA.

April 14, 2016 – Motorcycle Reconstruction course, Society of Automotive Engineers, Detroit, MI.

April 7-8, 2011 – PC-Crash Expert Skills Workshop, Orlando, FL.

October 28-30, 2004 – Motorcycle Investigation & Reconstruction, CAARS 2004 Conference, Santa Rosa, CA.

December 2002 – Crash Data Retrieval System Operator's Course for CDR system operator certification. Collision Safety Institute, San Diego, CA.

May 2001 – SAE Accident Reconstruction – TOPTEC, Professional Development Program, Phoenix, AZ.

February 1997 – Student in the one-week, 40-hour intensive course. Pedestrian and Bicycle Accident Reconstruction, Texas A&M Extension, Anaheim, CA.

August 1994 – Conference participant. SAE Low Speed Rear Impact Collisions – TOPTEC, Professional Development Program, Irvine CA.

April 1993 – Student in the three-week, 120-hour intensive course. Traffic Accident Reconstruction I & II, Northwestern University Traffic Institute, Chicago, IL.

March 1981 – Student in the one-week, 40-hour seminar. Advanced Composite Materials, University of California, Los Angeles, CA.