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## **Tyler L. Shaw, MSBE**

### *Biomechanics and Accident Reconstruction*

Mr. Shaw is a senior consultant specializing in biomechanical engineering, accident reconstruction, and product evaluations. Mr. Shaw holds a Master of Science degree in Bioengineering with Biomechanics emphasis, and a Bachelor of Science in Mechanical Engineering, both from San Diego State University where he served as president of the student chapter of the Society of Automotive Engineers. Mr. Shaw has testified as an expert in the fields of Accident Reconstruction and Biomechanics.

Mr. Shaw investigates human injuries in accidents and product failures using biomechanical engineering techniques that apply the principles of engineering to the human body. He has reconstructed and evaluated injury claims resulting from transportation accidents, consumer product use, industrial equipment accidents, and recreational activities such as cycling.

Mr. Shaw is the current chair of the AAAM Motorcycle Safety Special Interest Group committee. He holds motorcycle road racing competition licenses with several organizations and has been recreationally riding and commuting on motorcycles for over 20 years. Mr. Shaw is also a certified League Cycling Instructor (LCI) and bicycle repair technician.

Mr. Shaw has researched human motion and forces using anthropomorphic test devices and computational models of the human body. He has investigated the effectiveness of personal protective devices such as bicycle and motorcycle helmets. Mr. Shaw is an ISO accredited helmet testing technician and has tested hundreds of motorcycle and bicycle helmets for regulatory purposes.

Mr. Shaw has extensive experience testing and analyzing vehicle dynamics and motion and worked as a design and failure analysis engineer for automotive brake systems.

Mr. Shaw has been ACTAR certified for accident reconstruction and participates in professional organizations such as the Society of Automotive Engineers, American Association for Automotive Medicine, and the ASTM F08 protective headgear committee.

## **EDUCATION**

MS, Bioengineering, Biomechanics Emphasis, San Diego State University, 2014

BS, Mechanical Engineering, San Diego State University, 2009

## **ACCREDITATIONS AND CERTIFICATIONS**

- Accreditation Commission for Traffic Accident Reconstruction - ACTAR #4087
- M1 Motorcycle License Endorsement
- Motorcycle Road Racing Competition License WERA, CVMA, and AFM organizations
- ISO Accredited Helmet Testing Technician – DOT Standard; 2017

- Association for the Advancement of Automotive Medicine – AIS15 and Injury Scaling: Uses and Techniques; 2018
- League of American Bicyclists, League Cycling Instructor (LCI); 2015
- United Bicycle Institute, Certified Bicycle Technician; 2015
- Northwestern University Center for Public Safety -- Preserving and Analyzing Information from
- Heavy Vehicle EDRs; 2013
- Engineering Dynamics Corporation EDC Reconstruction; 2012
- Engineering Dynamics Corporation Vehicle Dynamics – Physics Simulation Analyst; 2011
- EIT/FE No. 13-295-39, California; 2011
- Collision Safety Institute, CDR Airbag Module Technician and Analyst; 2010

## PROFESSIONAL AFFILIATIONS

- Society of Automotive Engineers (SAE)
- ASTM International F.08.53 Headgear Subcommittee
- American Association for the Advancement of Automotive Medicine

## PUBLICATIONS AND PRESENTATIONS

- “Quantifying Engine Braking for Various Common Street Motorcycles”, H. Jansen, B. LeBlanc, C. Wilhelm, T. Shaw, A. Lowii, Society of Automotive Engineers 2020-01-0880, 2020.
- Fatzinger, EC, Shaw TL, Landerville JB, “The Effects of Power Interruption on Electronic Needle- Display Motorcycle Speedometers,” SAE Publication 2016-01-1474, 2016.
- Master’s Thesis: “Biomechanic Analysis of Injury Mitigation Performance for Novel Helmet Design,” Montezuma Publishing, 2014.
- ASTM F08.53 Low Velocity Impact Helmet Tests – 2017 Update – A Presentation for American Society of Testing and Materials F08 Committee Meeting; 2017.
- Oblique Impact Response of Elastomeric Damper Matrix Helmets – A Presentation for American Association for the Advancement of Automotive Medicine 61st Annual Conference; 2017.
- Presentation for LAPD Multidisciplinary Collision Investigation Team: Motorcycle Helmets; 2021
- Bicycle Helmets – A Presentation for Southwestern Association of Technical Accident Investigators Fall Conference; 2016.
- Lecture to San Diego County Sheriff Department Traffic Deputies: Pedestrian Accident Reconstruction; 2012
- Presentation for San Diego Police Department Traffic Division: Pedestrian Collision Reconstruction; 2011
- Testing and Technical Work Performed for: “An Analysis of EDR Data in Kawasaki Ninja 300 (EX300) Motorcycles,” Ed Fatzinger, Society of Automotive Engineers 2017-01-1436



- Testing and Technical Work Performed for: “Acceleration and Braking Performance of Transit Style Buses,” James English and Roman Beck, Society of Automotive Engineers 2012-01-0618
- Testing and Technical Work Performed for: Motorcycle Crash Testing (16 Crash Tests), California Association of Accident Reconstruction Specialists, 2017.

## **CONTINUING EDUCATION**

- SATAI Conference, 2026.
- National Football League – Helmet Challenge Symposium 2019
- Society of Automotive Engineers
  - o Reconstruction and Analysis of Motorcycle Crashes; 2018
  - o Reconstruction and Analysis of Rollover Crashes of Light Vehicles; 2018
  - o Vehicle Crash Reconstruction: Principles and Technology; 2018
  - o Vehicle Frontal Crash Occupant Safety and CAE; 2017
  - o Injuries, Anatomy, Biomechanics & Federal Regulation; 2016
  - o Accessing and Interpreting Heavy Vehicle Event Data Recorders; 2011
- Sports Concussion Institute – Concussion Summit; 2017
- Southwestern Association of Technical Accident Investigators, Inc, Seminar; 2012
- Spine Research Institute of San Diego – Whiplash Injury Biomechanics & Traumatology; 2015
- L.A. County Bicycle Coalition – Bicycling Traffic Skills 101; 2015
- TASS Americas – MADYMO Introduction Course; 2012

