



## Jeffrey S. Bonsall

MSME, EIT

### Senior Managing Accident Reconstructionist

#### Department

Accident Reconstruction & Forensic Animation

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#### Locations

Los Angeles, CA

## Biography

Mr. Bonsall joined Momentum Engineering Corp. in 2015. Prior to joining Momentum Engineering, he worked at an aftermarket automotive parts manufacturer conducting failure analysis and quality control. He has performed maintenance on vehicles from small, open-wheel racecars to half-ton pickup trucks. This experience allowed him to become acquainted with the dynamic handling differences between many different vehicle classifications and power transfer systems.

Since joining Momentum Engineering, Mr. Bonsall has been immersed in the minute details of reconstructing accidents, inspecting vehicles and sites, virtually recreating accidents using software packages such as PC-Crash, and acquiring various certifications to assist in his reconstructions. He brings a breadth of automotive knowledge and a new way of problem solving to the industry.

Mr. Bonsall earned a Bachelor of Science in Mechanical Engineering with an Automotive Engineering concentration from California State University, Northridge in 2015. During his time in school, he was able to become involved with many projects such as the Formula SAE racecar. He was also trained in vehicle dynamics, internal combustion engines, automotive powertrains, and suspension design. He is currently a student at California State University, Long Beach where he will earn his Master of Science in Mechanical Engineering.

## Credentials

- MSME | Master of Science - Mechanical Engineering
- EIT | Engineer in Training
- SAE - Accident Reconstruction Certificate Program, 2018
- CDR - Certified Trainer-Mentor (Crash Data Group), 2018
- CDR - Technician (Crash Data Group), 2017
- CDR - Data Analyst (Crash Data Group), 2017
- Berla - iVe Examiner, 2017
- Berla - Certified Vehicle System Forensic Technician, 2020
- Berla - Certified Vehicle System Forensic Examiner, 2020
- Certified Industrial Truck Operator (Toyota-Lift of Los Angeles)
- Certified Commercial Vehicle Brake Inspector (USDOT, FHA), 2022
- FMCSA - Vehicle Brake Inspector, CVSA Level V, 2022

## Representative Consulting Assignments

- Accident Reconstruction | Fatality Truck Lane Crossover - accident reconstruction to determine who crossed the centerline. | \$5M Jury Verdict
- Accident Reconstruction | Vehicle Impacting Pedestrian at Intersection - accident reconstruction to determine time-distance relationships. | \$3.5M Jury Verdict

## Professional Experience

- 2022 - Current | Senior Forensic Engineer | YA Engineering Services
- 2015 - 2022 | Senior Forensic Engineer | Momentum Engineering Corp.
- 2015 - 2015 | Testing and Validation Engineer | URO Parts

## Area of Practice

- Accident Reconstruction
- Failure Analysis
- Heavy Trucking
- Historic Preservation
- Human Factors
- Litigation Support
- Non-Destructive Testing
- Products Liability
- Motorcycle Accident Reconstruction
- Fire Origin & Cause

## Publications and Presentations

- 2019 - Fatzinger, E.C., Landerville J.B., Bonsall J.S., Simacek D.S., "An Analysis of Sport Bike Motorcycle Dynamics during Front Wheel Over-Braking", SAE Publication
- 2021 - Morales, R., Gamboa, J., Nguyen, B., Siddiqui, O., Bonsall, J., "Accuracy and Validation of Geotab GPS Fleet Tracking Devices", SAE Technical Paper

## Education

- California State University - Master of Science - Mechanical Engineering (MSME) - Dynamics, Controls, Vibrations & Robotics Concentration - Long Beach - California
- California State University - Bachelor of Science - Mechanical Engineering (BSME) - Automotive Technology Concentration - Northridge - California
- World Reconstruction Exposition (WREX) - April 2023
- SAE, Advanced Applications of Heavy Vehicle EDR Data - October 2022
- Bendix Air Brake Systems Training - August 2022
- SATAI Spring Conference - February 2022
- SAE WCX Digital Summit - June 2020
- SAE WCX Digital Summit - August 2019
- SAE, Fundamentals of Automotive All-Wheel Drive Systems - August 2019
- SAE, Introduction to Highly Automated Vehicles - July 2019
- Bendix Advanced Technology Training - May 2019
- Bendix Air Brake Training 101 - April 2019
- Crash Safety Solutions, Human Factors for Traffic Crash Reconstruction - January 2019
- SATAI Winter Conference - January 2019
- SAE, Applied Vehicle Dynamics - May 2018
- SAE, Vehicle Crash Reconstruction: Principles and Technology - April 2018
- EDR Users Summit - 2018
- EDC Accident Reconstruction Certificate - January 2018
- Berla, iVe Vehicle System Forensics - September 2017
- SAE, Introduction to Brake Control Systems: ABS, TCS, and ESC - May 2017
- EDR Users Summit - March 2017
- SAE, Vehicle Dynamics for Passenger Cars and Light Trucks - January 2017

- SAE, Accessing and Interpreting Heavy Vehicle Event Data Recorders - October 2016
- PC-Crash Vancouver Workshop - September 2016
- CA2RS 2nd Quarter Training - June 2016
- SATAI Spring Conference - March 2016
- SAE, Applying Automotive EDR Data to Traffic Crash Reconstruction - October 2015
- SATAI Fall Conference - September 3 2015
- FARO 3D Scanning Training Course - September 2015

## Affiliations

- Society of Automotive Engineering
- American Society of Mechanical Engineering
- Southwest Association of Technical Accident Investigators
- California Association of Accident Reconstruction Specialists

## Licenses

- 158335 - California - Registered Engineer in Training
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