



## Colin Smith

PE, MSBE, ACTAR

### Senior Biomechanist

#### Department

Accident Reconstruction & Forensic Animation

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#### Locations

San Diego, CA

## Biography

Colin P. Smith is a Forensic Biomechanist and an ACTAR-accredited Crash Reconstructionist. He joined the YA Engineering Services team in 2022 and has worked in the fields of forensic biomechanics and crash reconstruction consulting beginning in 2018. Mr. Smith has conducted novel biomechanics research with the University of Florida's Musculoskeletal Biomechanics Lab and with a local medical device start-up. Separately, he has contributed to both government- and industry-sponsored automotive safety research projects, including a project through the Center for Injury Biomechanics and the Virginia Tech Transportation Institute in collaboration with the Toyota Collaborative Safety Research Center to investigate crash mechanisms. In these studies, he analyzed crash databases, EDR data, and naturalistic driving data to develop a novel vehicle dynamics simulation and predict the ultimate safety benefit of a theoretical ADAS. Some of his research findings have been published in scientific journals and/or presented at national or international research conferences.

Mr. Smith applies his knowledge and experience to assist his clients in their pursuit of truth and justice. He reviews case evidence alongside reliable scientific literature and data specific to the body's biomechanical properties to aid in injury analyses, and he may provide biomechanical analyses and opinions to assist the trier of fact in the determination of injury causation. He also utilizes reliable crash reconstruction tools, literature, and/or methods to perform extensive crash reconstruction analyses to a reasonable degree of scientific certainty. He often conducts site and vehicle inspections using drones, LIDAR scanners, and cameras to preserve, analyze, and illustrate case evidence, and, when applicable, images vehicle EDRs and analyzes resultant EDR data to provide an unequivocal perspective on crash severity, as well as vehicle status and driver input during the moments preceding an event.

## Credentials

- PE | Professional Engineer
- MSBE | Master of Science - Biomedical Engineering
- ACTAR | ACTAR #4479
- FAA Certified Drone Pilot

## Professional Experience

- 2022 - Current | Forensic Biomechanist | YA Engineering Services, formerly Momentum Engineering Corporation
- 2021 - 2022 | Forensic Expert-Biomechanics and Accident Reconstruction | Aperture LLC
- 2020 - 2021 | Graduate Research Engineer | Center for Injury Biomechanics and the Virginia Tech Transportation Institute
- 2019 - 2020 | Undergraduate Researcher | University of Florida Musculoskeletal Biomechanics Lab
- 2019 - 2020 | Research and Development Intern | Myolyn LLC
- 2018 - 2019 | Forensic Science and Biomedical Engineering

## Area of Practice

- Accident Reconstruction
- Biomechanics
- Slip & Fall Evaluations

## Publications and Presentations

- Colin P. Smith, Rini Sherony, H. Clay Gabler, and Luke E. Riexinger, Identifying Pedal Misapplication Behavior Using Event Data Recorders, Society of Automotive Engineers (SAE) International Journal of Advances and Current Practices in Mobility, 2022-01-0817
- Max G. Bareiss, Colin P. Smith, and H. Clay Gabler, Identifying Pedal Misapplication Behavior Using Event Data Recorders, Society of Automotive Engineers (SAE) International Journal of Advances and Current Practices in Mobility, 2022-01-0817,
- Max G. Bareiss, Colin P. Smith, and H. Clay Gabler, Finding and understanding pedal misapplication crashes using a deep learning natural language model, Traffic Injury Prevention (TIP), 2021
- Colin P. Smith, Rini Sherony, and H. Clay Gabler, Identification and Characterization of Pedal Misapplication Crashes Using National and State Databases, International Research Council on the Biomechanics of Injury (IRCOBI) Conference Proceedings,, 9, 2021
- Chiara S. Dobrovolny, Bahar Dadashova, Mahmood Tabesh, Subasish Das, Hungjoo Kwon, Roger Bligh, Luke E. Riexinger, Colin P. Smith, H. Clay Gabler, and Shauna Hallmark, Chiara S. Dobrovolny, Bahar Dadashova, Mahmood Tabesh, Subasish Das, Hungjoo Kwon, Roger Bligh, Luke E. Riexinger, Colin P. Smith, H. Clay Gabler, and Shauna Hallmark, National Cooperative Highway Research Report 1055 submitted to the Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine, 6,, 2023
- Colin P. Smith, Pedal Misapplication: Past, Present, and Future”, MS Thesis, 12, 2022
- Colin P. Smith, H. Clay Gabler, and Luke E. Riexinger, Frequency and Characteristics of Pedal Misapplication Crashes, Project Report to Toyota Motor Corporation, 1, 2021

## Education

- Virginia Tech - Wake Forest School of Biomedical Engineering and Sciences - Master of Science - Biomedical Engineering - Blacksburg - Virginia
- University of Florida - Bachelor of Science - Biomedical Engineering - Gainesville - Florida

## Affiliations

- Association for the Advancement of Automotive Medicine (AAAM)
- International Research Council on the Biomechanics of Injury (IRCOBI)
- Society of Automotive Engineers (SAE)
- Biomedical Engineering Society (BMES)
- National Association of Professional Accident Reconstruction Specialists (NAPARS)
- Southwestern Association of Traffic Accident Investigators (SATAI)
- California Association of Accident Reconstruction Specialists (CA2RS)