

Exponent®
Engineering & Scientific Consulting

Ricky Nguyen, M.S., P.E., DFE

Senior Engineer | Vehicle Engineering
Denver
rnguyen@exponent.com

Professional Profile

Mr. Ricky Nguyen, M.S., P.E., DFE, is a Senior Engineer at Exponent, Inc. in the Vehicle Engineering Practice. He is a registered professional mechanical engineer in three states (Arizona, California, and Colorado) and an ACTAR-accredited Traffic Crash Reconstructionist. He has over a decade of experience in the fields of Forensic Engineering and Vehicle Crash Reconstruction.

Mr. Nguyen has been involved in hundreds of investigations and analyses of incidents, including single and multi-vehicle crashes; workplace accidents; and incidents involving consumer products and industrial and construction machinery and equipment. Aspects of these investigations have included crash/incident reconstruction, failure analysis, safety engineering assessments, and product design and safety analysis. He has testified in deposition and trial as an expert in vehicle accident reconstruction.

Mr. Nguyen utilizes engineering principles to reconstruct a wide range of traffic accidents, including high and low-speed motor vehicle crashes involving passenger vehicles, commercial vehicles, motorcycles, off-road vehicles, trains, pedestrians, and bicycles. In conducting reconstruction analyses, Mr. Nguyen has determined and evaluated aspects and factors that may have contributed to the crash, including the speed of the vehicles involved, their time-space relationship in the environment, adverse roadway conditions, line-of-sight, nighttime visibility, compliance with state and federal traffic regulations, traffic signal timing, and crash avoidance. These investigations have also included evaluation of the performance of vehicle components and systems, such as brakes, tires, seat belts, airbags, engine, drivetrain, steering, and suspension. Mr. Nguyen is competent with the latest technologies, including retrieval and analysis of crash data from vehicle event data recorders, aerial drone imagery, 3D laser scanning, photogrammetry, videogrammetry, and computer simulation.

In addition, Mr. Nguyen has reconstructed incidents involving a wide range of products, including consumer, industrial, and construction products and equipment such as window coverings, children's toys, above-ground pools, personal watercraft, sit-down and stand-up forklifts, pallet jacks, stationary and mobile cranes, aerial lifts, scissor-lifts, front-end loaders, excavators, skid steers, augers, wood chippers, horizontal boring machines, balers, and winches.

Mr. Nguyen has been involved in product liability matters in which he has evaluated safety aspects of products and has assessed claims related to design defects. His assessment has included comparison of the subject product to manufacturer specifications, industry standards and practices, peer product design, and patents, and the technological feasibility of alternative designs.

Academic Credentials & Professional Honors

M.S., Mechanical Engineering, University of Colorado - Denver, 2015

B.S., Mechanical Engineering, Colorado School of Mines, 2011

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National Society of Professional Engineers - Colorado (NSPE-CO) 2018 Young Engineer of the Year Award Recipient

Tau Beta Pi Engineering Honor Society

Licenses and Certifications

Professional Engineer, Arizona, #77073

Professional Engineer, California, #42404

Professional Engineer, Colorado, #PE.0053261

Prior Experience

Subject Matter Expert, Project Manager, Senior Engineer, and Mechanical Engineer, Knott Laboratory, LLC, 2012-2025

North American Gas Completions Engineer, BP, 2011-2012

EPT D&C Engineering Intern, BP, Summer 2010

Engineering Intern, Boeing, Summer 2009

Engineering Student Intern, United Launch Alliance, Summer 2008

Professional Affiliations

American Society of Mechanical Engineers (ASME)

National Academy of Forensic Engineers (NAFE)

National Society of Professional Engineers (NSPE) – Colorado Board Secretary and Colorado Central Chapter President

Society of Asian Scientists and Engineers (SASE) – Colorado Professional Chapter President

Society of Automotive Engineers (SAE)

Publications

Ziernicki, Richard, and Ricky Nguyen. 2023. "Application of Matchmoving for Forensic Video Analysis With Recorded Event Data." Journal of the National Academy of Forensic Engineers 40 (1).

Ziernicki, Richard, and Ricky Nguyen. 2022. "Current Assessment of Stand-Up Forklifts' Underride Accidents." Journal of the National Academy of Forensic Engineers 39 (2).

Ziernicki, Richard, and Ricky Nguyen. 2020. "Forensic Engineering Analysis of Fatal Overhead Crane Accident." Journal of the National Academy of Forensic Engineers 37 (1).

Railsback, Ben T., Richard M. Ziernicki, Steve Knapp, and Ricky Nguyen. 2018. "Forensic Engineering Analysis of Unintended Movement of Powered Industrial Trucks." Journal of the National Academy of

Forensic Engineers 35 (1).

Richard M. Ziernicki, Ben T. Railsback, Steve D. Knapp, William H. Pierce, and Ricky L. Nguyen. 2014. "Stand-Up Forklift Egress Times as a Function of Operator Compartment Guarding." 2014 ASME International Mechanical Engineering Congress and Exposition IMECE2014-38847.

Presentations

“Application of Matchmoving for Forensic Video Analysis of Pedestrian/Train Collision and Verification with Recorded Event Data.” National Academy of Forensic Engineers (NAFE) Annual Meeting. San Antonio, TX. Jan. 7, 2023.

“Current Assessment of Stand-Up Forklift Underride Accidents.” National Academy of Forensic Engineers (NAFE) Annual Meeting. Online. Jan. 9, 2021.

“Multiple Violations of Safety Regulations Resulting in Fatal Crane Accident.” Speaker. Inner Circle of Investigators, Inc., 2019 Platinum Anniversary Educational Conference. Denver, CO. Oct. 25, 2019.

“Forensic Engineering Analysis of a Fatal, Overhead Crane Accident.” Speaker. National Academy of Forensic Engineers (NAFE) Annual Meeting. Denver, CO. Jul. 27, 2019.

Additional Education & Training

PhotoModeler for Collision Investigation, PhotoModeler Technologies, 2026

HVE Forum 2026, Engineering Dynamics Company LLC, 2026

Toyota Techstream Training, Collision Publishing, 2024

EDR User’s Summit, Collision Publishing, 2024

2023 Winter Conference, National Academy of Forensic Engineers (NAFE), 2023

IDRR Software Instruction, Driver Research Institute, 2022

2022 Winter Conference, National Academy of Forensic Engineers (NAFE), 2022

Pedestrian/Bicycle Crash Investigation – Level I, Institute of Police Technology and Management (IPTM), 2021

2021 Virtual Winter Conference, National Academy of Forensic Engineers (NAFE), 2021

2019 Summer Conference, National Academy of Forensic Engineers (NAFE), 2019

Motorcycle Safety Foundation: Basic RiderCourse Updated, T3RG Motorcycle Schools, 2019

Crash Data Retrieval (CDR) Data Analyst Course, CSI Collision Safety Institute, 2018

ACTAR Test Preparation Comprehensive Course, Institute of Police Technology and Management (IPTM), 2016

Crash Data Retrieval (CDR) Technician Levels 1 and 2, CSI Collision Safety Institute, 2012

PC Crash Training Course. MEA Forensic Engineers & Scientists Ltd, 2012

Peer Reviews

Journal of the National Academy of Forensic Engineers (NAFE)