JSFORENSICS

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Curriculum Vitae

Justin C. Ngo, P.E., ACTAR

Accident Reconstruction Expert

OVERVIEW

Mr. Ngo is a licensed Professional Engineer, ACTAR certified accident reconstructionist, a certified FAA Part 107 sUAS Pilot and has been working in the Accident Reconstruction and vehicle testing fields since 2016. He holds a Bachelor of Science in Mechanical Engineering (BSME) from California State University Northridge.

He has experience in accident reconstruction investigation involving heavy trucks and passenger vehicles. He is qualified to perform heavy duty truck and passenger vehicle (CDR) event data recorder ("Black Box')' data imaging. Mr. Ngo has extensive experience with vehicle testing and instrumentation along with complex data analysis following this testing.

AREAS OF EXPERTISE

- Accident Reconstruction
- EDR & HVEDR data imaging and analysis
- Computer reconstruction and simulations
- Computer Aided Design and photogrammetry analysis
- Video analysis
- Vehicle testing and Instrumentation
- Data Analysis via MATLAB / MS Excel
- Audio Vehicle speed analysis
- Human Factors for Crash Reconstruction

EDUCATION

April. 2019   **California State University, Northridge** – Northridge, CA
               Bachelors of Science, Mechanical Engineering (BSME)

ACCREDITATIONS AND CERTIFICATIONS

2023   **ACTAR Certification**
        Accreditation Commission for Traffic Accident Reconstruction – No. 4755

2023   **Tesla EDR Technician**
        Tesla EDR Operator/Technician course

2023   **Hyundai/Kia EDR Technician**
        Hyundai/Kia EDR Operator/Technician course

2022   **Professional Engineer** – State of California
        Mechanical – Certificate # 41454

2022	**SAE Accident Reconstruction Certificate Program – SAE**
	Society of Automotive Engineers 6 course program

2020	**Collision Safety Institute, Inc.**
	Crash Data Retrieval (CDR) Data Analyst Course

2018	**Engineer in Training (E.I.T.)** - State of California
	Mechanical - Certificate # 165623

2016	**FAA Part 107 sUAS Pilot** - FAA
	Remote Pilot – *Certificate # 3957835*
	Recertified in: 2018, 2020, 2021, 2024

EMPLOYMENT HISTORY

Jan. 2022 - Present   **JS Forensic Consulting, LLC** – Carlsbad, CA
Accident Reconstructionist – Engineer

Accident Reconstruction Expert specializing in reconstructions and analysis of low- and high-speed accidents involving automobiles, tractor-trailers, trucks, motorcoaches, motorcycles, heavy equipment, pedestrians, and other equipment and vehicles in all modes of collision, including small overlap impacts, rollovers and underrides/overrides. Analyze vehicle dynamics and performance, vehicle kinematics, occupant kinematics, advanced vehicle technologies, and vehicle systems.

June. 2016 - Dec. 2021   **Mecanica Scientific Services Corporation** – Oxnard, CA & San Diego, CA
Accident Reconstructionist – Research Engineer

Accident Reconstructionist specializing in reconstructions and analysis of low- and high-speed accidents involving automobiles, tractor-trailers, trucks, motorcycles, pedestrians, and other equipment and vehicles in all modes of collision, including small overlap impacts, rollovers and underrides/overrides. Analyze vehicle dynamics and performance, vehicle kinematics, occupant kinematics, advanced vehicle technologies, and vehicle systems. Analyze and test vehicle ADAS systems using various logging equipment.

PROFESSIONAL MEMBERSHIPS

- Society of Automotive Engineers (SAE)
- Southwestern Associate of Technical Accident Investigators, Inc. (SATAI)
- National association of Professional Accident Reconstruction Specialists (NAPARS)

PUBLICATIONS AND PRESENTATIONS

- Vega, H.V., Ngo, J., Engleman, K., and Suway, J., "Speed Determination Using Audio Analysis of Dash Camera Video for Vehicle Accident Reconstruction," SAE Technical Paper 2023-01-0632, 2023, doi:10.4271/2023-01-0632.
- Steiner, J., Armstrong, C., Kress, T., Walli, T. et al., *"Commercial Vehicle Global Positioning System Based Telematics Data Characteristics and Limitations,"* SAE Technical Paper 2017-01-1439, 2017, doi:10.4271/2017-01-1439

CONTINUING EDUCATION

- NAPARS 2024 Annual Joint Conference. Online presentations. September 2024
- Advanced course of instruction in Human Factors for Crash Reconstruction. Ottawa, Canada. September 2024
- ASTM F2508-2024 Mark IIIB Slip Testing. Baltimore, MD. April 2024
- HVE Forum by Engineering Dynamics Group. Berkley, CA. March 2024
- Response Forum by Driver Research Institute. Long Beach, CA. February 2024
- EDR Summit by Collision Magazine. Houston, TX. February 2024
- Nighttime Crash Scene Investigation training online by NAPARS. January 2024
- Tesla EDR tool Technician course online. September 2023
- Hyundai / Kia EDR tool Technician course online. September 2023
- WREX Conference. World Reconstruction Expo with Industry Lectures and crash testing. Crash test speaker. Orlando, FL. April 2023
- Accident Reconstruction, the Autonomous Vehicle and ADAS, Seminar No. C1869; Ruckersville, VA. October 2022
- Vehicle Crash Reconstruction: Principles and Technology, Seminar No. C1728; Las Vegas, NV. May 2022
- Advanced PhotoModeler for Collision Reconstruction. A 4-day course emphasized in learning and understanding photogrammetric techniques through literature and exercises. March 2022.
- IDRR User Forum. The IDRR forum is a three-day training discussing all the new research, opinions and changes in the IDRR software, turn across path crashes, intersection crashes, nighttime crashes, and rear-end crashes. March 2022.
- SATAI Conference. The conference consist of on-site crash testing as well as lecture presentations by nationally recognized experts and representatives of leading educational institutions involved in fields related to crash research, accident investigation and advanced training. February 2022.

- WEST COAST - ATA, Inc. Troubleshooting Air & ABS Braking Systems; October 2020

- SAE International, Applying Automotive EDR Data to Traffic Crash Reconstruction, Seminar No. C1210; September 2020
- CSI, CDR course; Camarillo, CA July 2020
- SAE International, Advanced Applications of Heavy Vehicle EDR Data, Course No. C1901; Oxnard, CA, October 2019
- SAE International, Accessing and Interpreting Heavy Vehicle Event Data Recorders, Course No. C1022; Oxnard, CA, October 2019
- SAE International, Fundamentals of Vehicle Dynamics Seminar No. PD731620; Oxnard, CA, August 2019

RESEARCH RELATED ACTIVITIES

- Audio testing for Dash Camera speed analysis of wheel speed frequency traces; Carlsbad, CA, August 2024
- Audio testing for Dash Camera speed analysis over defined audio cues in the road way; Santee, CA, July 2023
- Participant, Research and Testing for the feasibility of heavy vehicle cybersecurity; Warren, Michigan; June 2018

- Managed and coordinated advanced driver assistance systems (ADAS) testing on heavy trucks including multiple test vehicles and ADAS variants for a large fleet. Testing included various runs with a stationary target; Mountville, SC, June 2018
- Managed and coordinated medium duty vehicle dynamics testing involving the evaluation and analysis of GPS based telematics systems; Buttonwillow, CA, January 2020
- Managed and coordinated advanced driver assistance systems testing on heavy trucks including multiple test vehicles and ADAS variants for a large fleet. Testing included various runs with a stationary and moving target (Soft Car 360) following ISO and NHTSA standards. Additional runs included fringe testing; Buttonwillow, CA, August 2020