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EMMANUEL (NOEL) JAY F. MANUEL

SENIOR CONSULTANT

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Emmanuel (Noel) Jay F. Manuel is a Senior Consultant with ESi in the Aurora, Illinois office. Mr. Manuel has a Bachelor of Science in Mechanical Engineering from the University of Texas at San Antonio. His principal areas of professional activity include accident investigation, documentation and reconstruction, vehicle dynamics, low and high-speed vehicle impact analysis, vehicle dynamic simulation, event data recorder analysis, automotive research, videogrammetry, instrumentation, and testing. The vehicles involved range from passenger, commercial, agricultural, rail, and recreation. The videos analyzed range from surveillance style static cameras to dashcam style moving cameras.

Areas of Specialization

Low and High-Speed Vehicle Impact Analysis
Vehicle Dynamics and Testing
Vehicle Dynamics Simulation
Accident Investigation/Reconstruction
Videogrammetry
Automotive and Mechanical Design

Education

B.S., Mechanical Engineering, University of Texas, San Antonio, TX

Awards/Honors/Acknowledgements

Vehicle Accident Analysis and Reconstruction Methods, Third Edition. SAE Textbook. *R. Matthew Brach, Raymond M. Brach, James J. Mason.*

2014 University of Texas at San Antonio College of Engineering Technology Symposium

1st Place in the Mechanical Engineering Departmental Awards, capstone senior design project

2nd Place in Center for Innovation and Technology Entrepreneurship (CITE) 100K competition

Continuing Education, Short Courses

Hyundai-Kia & Tesla EDR Tools Technician,

University of North Florida Institute for Police Technology and Management (IPTM), Aurora, IL, 2025

Passenger Restraint Safety Systems,

University of North Florida Institute for Police Technology and Management (IPTM), Aurora, IL, 2025

The Fundamentals of Automotive All-Wheel Drive System

SAE International, August 2025

Driver Distraction from Electronic Devices: Insights and Implications
SAE International, December 2024

Event Data Recorder Update and Analysis
Ruth Consulting, September 2023

Accessing and Interpreting Heavy Vehicle Event Data Recorders
SAE International, June 2023

eRailSafe Certified
February 2024 - 2026

Traffic Signal Timing Records Interpretation and Analysis
University of Tennessee Knoxville, Center for Transportation Research October 2020

Managing Fall Protection
Construction Safety Council, October 2020

Traffic Crash Reconstruction for the Forensic Engineer
Northwestern University Center for Public Safety, Ann Arbor, MI, March 2019

Forklift Operator Safety Training and Certification
S.A.F.E. Aurora, IL, January 2019

Applied Vehicle Dynamics
Autobahn Country Club, Joliet, IL, October 2018

FARO Focus 3D Operator
Ann Arbor, MI, April 2018

Human Factors in Traffic Crash Reconstruction
IPTM, University of North Florida, November 2017

Air and Foundation Brake Training
Bendix Spicer Foundation Brake LLC, Universal Technical Institute, June 2017

Vehicle Crash Reconstruction Methods
SAE International, May 2016

Crash Data Retrieval (CDR), Data Analyst
Northwestern University, October 2016

**Advanced Human Vehicle Environment
(HVE)**
Engineering Dynamic Corporation HVE Forum, March 2015

Advanced Collision Investigation
Texas A&M Engineering Extension Service, August 2014

Positions Held

Engineering Systems Inc., Aurora, Illinois

Senior Consultant – 2024 - present
Senior Staff Consultant – 2019 - 2023
Staff Consultant – 2015 – 2019

J. Eftekhari & Associates, San Antonio, Texas

Staff Engineer – 2012 – 2015

Imagine Lifestyles, San Antonio, Texas

Driving Instructor – 2015

LensCrafters, San Antonio, Texas

Lead Technician – 2007 – 2014

RKG Enterprises, Inc., San Antonio, Texas

Electronics Technician/Fabrication – 2010 – 2011

Boeing, Universal City, Texas

Internship – 2003

Professional Affiliations

Society of Automotive Engineers (SAE)
SAE Chicago Section Officer of Student and Young Professional Outreach

American Society of Mechanical Engineers (ASME)

Illinois Association of Technical Accident Investigators (IATAI)

Publications/Presentations

"Event Data Recorders in Passenger Vehicles", **E.J. Manuel, Presenter**

Wisconsin Defense Counsel Spring Conference, Continuing Education, Wisconsin Dells, WI, August 2025

"Event Data Recorders in Passenger Vehicles", **E.J. Manuel, Presenter**

Illinois Association of Defense Trial Counsel Continuing Education, Aurora, IL, August 2024

"Addition of Tire Forces into Low-Speed Bumper-to-Bumper Crash Reconstruction Simulation Models",

R. Matthew Brach, Jacob Stegemann, **Emmanuel (Noel) Jay F. Manuel**, and Nicholas Civitanova, SAE Technical Paper 2024-01-2479, SAE International, Warrendale, PA, 2024.

"Identification of Mixed-In Service Automotive Fluids Inside a Continuously Variable Transmission (CVT) and Differentials", **Emmanuel (Noel) Jay F. Manuel**, Presenter, International Materials Applications and Technologies (IMAT) American Society of Metals International (ASM) 109th Annual Society Meeting, New Orleans, LA, September 15, 2022.

“Vehicle Accident Reconstruction During a Pandemic”, **Emmanuel (Noel) Jay F. Manuel**, Article, The Journal of the DuPage County Bar Association Brief, Vol 3, Issue 3, November 2020.

“Appointment of Liability in Autonomous Vehicle Accidents”, Dennis D. Fitzpatrick, W. Gregory Aimonette, Colleen A. Beverly, William C. Dickinson, Patrick J. McGuire, Scott Ritchie, Hillard M. Sterling, Robert A. Stern, Meredith D. Stewart, James M. Weck, Edward M. Kay and Invited contributor **Emmanuel (Noel) Jay F. Manuel**, White Paper, Clausen Miller P.C. October 2020.

“Sensitivity Analysis of Various Vehicle Dynamic Simulation Software Packages Using Design of Experiments (DOE)”, R. Matthew Brach, Shawn Capser, **Emmanuel Jay Manuel**, Joshua Rogers, Robert Bailey, Paper 2020-01-0639, SAE International, Warrendale, PA, 2020.

“Low-Speed Vehicle Collision Analysis”, **E.J. Manuel** and A.C. Mathias, Co-Presenter Illinois Association of Defense Trial Counsel Continuing Education, Chicago, IL, November 2018.

“Videogrammetry in Vehicle Crash Reconstruction with a Moving Video Camera”, **E.J. Manuel**, R.A. Mink, and D.H. Kruger, SAE Technical Paper 2018-01-0532, April 2018.

“Videogrammetry in Vehicle Crash Reconstruction with a Moving Video Camera”, **E.J. Manuel**, Presenter, SAE World Congress 2018, Detroit, MI, April 11, 2018.

“Event Data Recorders in Passenger Vehicles”, **E.J. Manuel**, Presenter Illinois Association of Defense Trial Counsel Continuing Education, Aurora, IL, November 2016.