



## **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, 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, 2014

### **Awards/Honors**

1st Place in the Mechanical Engineering Departmental Awards, capstone senior design project  
2nd Place in Center for Innovation and Technology Entrepreneurship (CITE) 100K competition  
2014 University of Texas at San Antonio College of Engineering Technology Symposium

### **Continuing Education, Short Courses**

**Event Data Recorder Update and Analysis**  
Ruth consulting, September 2023

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

**eRailSafe Certified**  
May 2020 – April 2022

**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. Eftekhar & 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 Chair of Student and Young Professional Outreach

American Society of Mechanical Engineers (ASME)

**Publications/Presentations**

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

R. Matthew Brach, Jacob Stegemann, Emmanuel Jay 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) 109<sup>th</sup> Annual Society Meeting, New Orleans, LA, September 15, 2022.

“Vehicle Accident Reconstruction During a Pandemic”, **Emmanuel 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.