



4215 Campus Drive  
Aurora, IL 60504

## **RICHARD A. MINK, MSME, PE SENIOR CONSULTANT**

[ramink@engsys.com](mailto:ramink@engsys.com)

Mr. Mink is a Senior Consultant in the Automotive Practice Group at Engineering Systems Inc. (ESI). His work at ESI focuses on vehicle crash investigations and analyses, including the retrieval and analysis of vehicle crash data, and vehicle crash reconstructions. He performed similar work while employed as a consultant by Brach Engineering, which became part of ESI in 2014. He earned a Master of Science degree in Mechanical Engineering from Purdue University and a Bachelor of Science degree, Cum Laude, in Mechanical Engineering from The University of Toledo.

Before joining ESI, he was employed as a mechanical engineer by Navistar, Inc., an original equipment manufacturer (OEM) of trucks and buses. Initially, while working in Navistar's Applied Mechanics Laboratory, he conducted numerous tests and analyses pertaining to the performance, strength, or durability of various heavy truck systems and components, including cab structure, occupant seating, occupant restraint systems, and various chassis components. Later, while working in Navistar's Product Integrity Group, he investigated numerous heavy truck crashes and fires and provided technical consultation and testimony in numerous product liability matters pertaining to heavy truck crashworthiness, compliance with federal regulations and industry standards, and the performance of heavy truck systems and components.

Mr. Mink is a licensed Professional Engineer (PE) in Indiana and Ohio and an SAE-certified accident reconstructionist. He also holds a Class A Commercial Driver's License in Indiana, with endorsements for tank vehicles, double/triple trailers, passenger transport, and school buses.

### **Areas of Specialization:**

Vehicle Crash Data Retrieval and Analysis for Heavy and Light Vehicles

Vehicle Crash Investigation, Analysis, and Reconstruction

Commercial Vehicle Cab Structure, Seats, Occupant Restraints, Steps, and Grab Handles

Compliance with Federal Motor Vehicle Safety Standards, ECE Regulations, and Industry Standards

Compliance with Federal Motor Carrier Safety Regulations

### **Education:**

Master of Science (MS) in Mechanical Engineering; Purdue University, West Lafayette, Indiana

Bachelor of Science (BS) in Mechanical Engineering, Cum Laude; The University of Toledo, Toledo, Ohio

### **Professional Licensure-Professional Engineer (PE):**

State of Indiana    License No. PE10201218

State of Ohio        License No. PE.84922

## Positions Held:

### **Engineering Systems Inc.–Aurora, Illinois**

Senior Consultant, 2022 – present

Senior Staff Consultant, 2019 – 2021

Staff Consultant, 2014 – 2019

### **Brach Engineering, LLC–Granger, Indiana**

Consulting Engineer, 2012–2014

### **Navistar, Inc.–Fort Wayne, Indiana**

Mechanical Engineer, 1995–2012

### **Purdue University–West Lafayette, Indiana**

Graduate Student, 1993–1995

### **United States Navy–Pensacola, Florida and San Diego, California**

Naval Flight Officer, 1987–1993

## Publications and Presentations:

Contributor to SAE International's *Dictionary of Vehicle Accident Reconstruction and Automotive Safety*, By R. Matthew Brach, PhD, PE, Publication R-556, SAE International, 2023

Manuel, E., **Mink, R.**, and Kruger, D., "Videogrammetry in Vehicle Crash Reconstruction with a Moving Video Camera," SAE Technical Paper 2018-01-0532, 2018, doi:10.4271/2018-01-0532.

Brach, R., Brach, R., and **Mink, R.**, "Nonlinear Optimization in Vehicular Crash Reconstruction," SAE Int. J. Trans. Safety 3(1):2015, doi:10.4271/2015-01-1433.

## Professional Activities:

SAE International (SAE)

National Society of Professional Engineers (NSPE)

Pi Tau Sigma (International Mechanical Engineering Honor Society)

## Continuing Education Courses Completed:

*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*

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

*Advanced Applications of Heavy Vehicle EDR Data, SAE, 2022*

*Bendix Advanced Technology Training, Bendix Spicer Foundation Brake LLC, 2021*

*Traffic Signal Timing Records Interpretation and Analysis, The University of Tennessee, 2020*

*Applying Automotive EDR Data to Traffic Crash Reconstruction, SAE, 2019*

*Applied Vehicle Dynamics Course, Precision Auto Research, 2018*

*Pedestrian/Bicycle Crash Investigation–Level I, University of North Florida, 2018*

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

*Vehicle Dynamics for Passenger Cars and Light Trucks*, SAE, 2017  
*Fundamentals of Heavy Truck Dynamics*, SAE, 2017  
*Reconstruction and Analysis of Rollover Crashes of Light Vehicles*, SAE, 2016  
*Reconstruction and Analysis of Motorcycle Crashes*, SAE, 2016  
*Crash Data Retrieval (CDR)–Data Analyst*, Northwestern University, 2016  
*Vehicle Crash Reconstruction Methods*, SAE, 2015  
*Crash Data Retrieval (CDR)–Technician Level 1*, Collision Safety Institute, 2014  
*Accessing and Interpreting Heavy Vehicle Event Data Recorders*, SAE, 2014  
*Commercial Vehicle Air Brake Systems Training*, Bendix Spicer Foundation Brake LLC, 2013  
*Traffic Accident Investigation 7–Commercial Vehicle*, Michigan State University, 2012  
*Hands-On Vehicle Fire/Arson Investigation*, Public Agency Training Council, 2011  
*Fire Investigation and Product Liability Litigation*, University of Wisconsin, 2008  
*Fire/Arson Investigation*, IVY Tech Community College, 2007  
*Vehicle Frontal Crash Occupant Safety and CAE*, SAE, 2007  
*Modern Investigation Techniques*, IAAI, Ohio Chapter, 2007  
*Commercial Vehicle Braking Systems*, SAE, 2005  
*Design FMEA Participant Workshop*, Eastern Michigan University, 2005  
*Mechanics of Heavy-Duty Truck Systems*, University of Michigan, 2004  
*Traffic Accident Reconstruction I*, Northwestern University, 2003  
*CVSA Inspection Familiarization*, Commercial Vehicle Safety Alliance, 2002  
*Heavy Vehicle Rollover TOPTEC: Prevention, Analysis and Reconstruction*, SAE, 2000  
*Injuries, Anatomy, Biomechanics & Federal Regulation*, SAE, 2000

**Patents:**

Hybrid Electric Vehicle Battery Box and Supports, U.S. Patent 6,547,020  
Seat Belt Anchor and Method of Installation in a Mobile Vehicle, U.S. Patent 6,158,774