



4215 Campus Drive  
Aurora, IL 60504

## **NICHOLAS E. CIVITANOVA** **SENIOR STAFF CONSULTANT**

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Mr. Nicholas Civitanova is a Mechanical Engineer and a Senior Staff Consultant for Engineering Systems Inc (ESI) in the Aurora, Illinois office. He has a Bachelor of Science in Mechanical Engineering from Purdue University in West Lafayette, Indiana. Mr. Civitanova specializes in accident investigation and reconstruction of recreational, passenger, and commercial vehicles with expertise in impact analysis, vehicle dynamics, instrumentation, data acquisition and analysis, and three-dimensional laser scanning. Mr. Civitanova has experience with biomechanical instrumentation, incorporating the use of motion capture technologies to measure and visualize biological motion.

### **Areas of Specialization**

Accident Investigation and Reconstruction  
Vehicle Dynamics Analysis and Simulation  
Data Collection  
Vehicle Systems Analysis

### **Education**

B.S., Mechanical Engineering, Purdue University, West Lafayette, IN, 2022

### **Professional Affiliations/Honors**

#### **Society of Automotive Engineers (SAE)**

Member

#### **American Society of Mechanical Engineers (ASME)**

Member

### **Positions Held**

#### **Engineering Systems Inc., Aurora, IL**

Senior Staff Consultant – 2025-present  
Staff Consultant, 2023-present

#### **Engineering Systems Inc., Ann Arbor, MI**

Engineering Intern, 2021 - 2022

## **Continuing Education**

### **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 Vehicle Dynamics**

SAE Certificate of Achievement, April 2025

### **Driver Distraction from Electronic Devices: Insights and Implications**

SAE Certificate of Achievement, April 2025

### **Traffic Crash Reconstruction for Engineers**

Northwestern University Center for Public Safety, Aurora, IL, January 2024

### **Recon – 3D Training Course**

Certificate of Completion, December 2023

### **Virtual Crash Simulation Basics Training**

Certificate of Training, November 2023

### **Virtual Crash Interface Training**

Certificate of Training, November 2023

### **Event Data Recorder Update and Analysis**

Ruth Consulting, September 2023

### **Bosch CDR Tool Technician Training**

Certificate of Training, April 2023

### **FARO Focus 3D Operator**

Certificate of Training, Aurora, IL, 2023

## **Publications/Presentations**

“Sensitivity Analysis of Virtual Crash Simulation Software Using Design of Experiments (DOE),” Roberts, J., **Civitanova, N.**, Stegemann, J., Buzdygon, D., and Thobe, K. SAE International, SAE Technical Paper, 2025. 2025-01-8693, doi:10.4271/2025-01-8693.

“Sensitivity Analysis of Virtual Crash Simulation Software Using Design of Experiments (DOE),”  
**Co-Presenter**, SAE WCX, Detroit, MI, April 8-10, 2025.

“Inclusion of Tire Forces into Low-Speed Bumper-to-Bumper Crash Reconstruction Simulation Models,”  
Brach, M., Stegemann, J., Manuel, E.J., and **Civitanova, N.** SAE International, SAE Technical Paper, 2024. 2024-01-2479, doi:10.4271/2024-01-2479.

“Inclusion of Tire Forces into Low-Speed Bumper-to-Bumper Crash Reconstruction Simulation Models”  
**Co-Presenter**, SAE WCX, Detroit, MI, April 16-18, 2024.