FOCUS FORENSICS

MINNEAPOLIS
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Administrative Address:
133 East 143rd Avenue
Tampa, FL 33613

Curriculum Vitae

Paul J. Montalbano, P.E.

Professional Profile

Mr. Montalbano is a licensed Professional Engineer with education, training, experience and national certifications in the fields of Mechanical Engineering, Forensic Engineering, Accident Reconstruction and Human Factors.

Mr. Montalbano graduated *Summa Cum Laude* (with highest honor) from the University of South Florida with a Bachelor of Science in Mechanical Engineering and a Master of Science in Mechanical Engineering, where his coursework and scientific research focused on computational analysis (solving problems with math), kinematics (the study of the motion of objects), kinetics (the study of forces and impacts), dynamics (the study of how objects behave in time and space from forces and impacts) and physics (Newton's laws of motion).

Mr. Montalbano holds advanced and specialized training in the investigation, engineering analysis and reconstruction of dynamic incidents involving passenger vehicles, commercial vehicles, motorcycles, ATVs, bicycles, pedestrians and other mechanical systems. Specific areas of expertise include collision reconstruction engineering analysis, vehicle dynamics modeling, event data retrieval (EDR), advanced driver assistance systems (ADAS), dash camera and security camera video analysis, computer simulation analysis, 3-D imaging, modeling and animations, and human factors engineering evaluation of the performance and responses of drivers and other users in the transportation environment.

Mr. Montalbano holds two national certifications in the field of Accident Reconstruction through the Society of Automotive Engineers (SAE) and the Accreditation Commission for Traffic Accident Reconstruction (ACTAR) and has been qualified as an expert in Accident Reconstruction and Human Factors in both criminal proceedings and civil litigation in multiple states at state and federal levels.

Contact Information

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Orlando Office
1826 Henley Street
St. Cloud, FL 34771

Education

Master of Science in Mechanical Engineering
University of South Florida
Tampa, Florida

Bachelor of Science in Mechanical Engineering
Summa Cum Laude (with highest honor)
University of South Florida
Tampa, Florida

Work Experience

Focus Forensics, LLC
Managing Engineer: 2023-*Present*
Senior Engineer: 2014-2022

Armstrong Forensic Engineers, Inc.
Consultant: *2013-2014*

University of South Florida
Graduate Research Assistant: *2011-2012*
Teacher Assistant: *2011-2012*
Undergraduate Research Assistant: *2010-2011*

Licensure and Professional Certification

Professional Engineer, State of Alabama, # 39202
Professional Engineer, State of Florida, # 82443
Professional Engineer, State of Georgia, # PE-045710
Professional Engineer, State of Mississippi, # 30902

Accredited Accident Reconstructionist, #2727
Accreditation Commission for Traffic Accident Reconstruction (ACTAR)

Certified Accident Reconstructionist
Society of Automotive Engineers

Certificate of Management in Human Factors
Embry-Riddle Aeronautical University

Florida Motorcycle Endorsement
Motorcycle Training Institute

Remote Pilot – Small Unmanned Aircraft System
Federal Aviation Administration

Professional Affiliations

American Society of Mechanical Engineers (ASME)

Society of Automotive Engineers (SAE)

Human Factors and Ergonomics Society (HFES)

- Full Member (requires over 5 years of Human Factors Experience)
- Forensics Professional Technical Group
- Perception and Performance Technical Group

National Association of Professional Accident Reconstruction Specialists (NAPARS)

Professional Development

Axiom Forensic

- Motorcycle Collision Reconstruction, 2018

Collision Safety Institute / Collision Publishing

- EDR Summit, 2017
- Annual Crash Conference and Full Scale Crash Testing, 2017
- EDR Summit, 2020
- EDR Summit, 2024

Driver Research Institute (Human Factors)

- Nighttime Recognition on Unlit Roads, 2019
- Nighttime Recognition on Lighted Roads, 2020
- Recognition of Closing Speed and Closing Threshold, 2021
- Path Intrusion Reaction Time Studies, 2021
- Driver Response Research User Forum and Training, 2022
- Driver Response Research User Forum and Training, 2024
- Driver Response Research User Forum and Training, 2025

Drone Launch Academy

- FAA Part 107 Remote Pilot Course, 2018

Embry-Riddle Aeronautical University

- Human Factors Analysis and Classification System (HFACS), 2025
- Advanced Human Factors (HFACS), 2026
- Mastering Human Factors (HFACS), 2026

Engineering Dynamics Corporation

- Collision Reconstruction using HVE Simulation Modeling (EDC Simulations), 2015

EOS Systems, Inc.

- Collision Reconstruction using Photogrammetry, 2015

FARO Technologies, Inc.

- FARO Laser Scanner Training and Operation, 2015
- FARO Reality for Crash Reconstruction, 2016

Focus Forensics, LLC

- Transportation Engineering, Accident Reconstruction and Human Factors Insights, 2022
- Transportation Engineering, Accident Reconstruction and Human Factors Insights, 2024
  - Human Factors for Driver Response
  - Traffic Signal Design and Operation
  - Transportation Engineering Sight Distance Standards
  - Automotive Mechanical Systems and Data Acquisition
  - Photogrammetric Methods
  - Video Analysis with Telemetry Data
  - LIDAR Scanning and Data Processing
  - Virtual Crash Applications for Simulation and Animation
  - PC Crash Applications for Steering and Yaw Rate
  - Expert Testimony Regulations and Standards
  - Commercial Vehicle EDR Data Extraction and Analysis
  - Vehicle EDR Systems for Toyota and General Motors
- Transportation Engineering, Accident Reconstruction and Human Factors Insights, 2025
  - EDR Extraction and Analysis Methods for Video Radar Decision Units (VRDU)
  - Acquisition and Analysis Methods for Temporary Roadway Conditions
  - LIDAR Scanning and Data Processing
  - Air Brake Testing Standards and Techniques
  - Heavy Vehicle EDR Extraction and Analysis Methods
  - Drone Mapping Techniques and Processing
  - Data Processing and Analysis with Cloud Compare
  - Photogrammetry Software Methods and Techniques
  - Technology for Capturing Photo/ Video Demonstratives of Available Driver Views
  - Telemetry Overlay Software Techniques and Processing
  - VCrash Animations and Simulations for Pedestrian and Bicycle Collisions
  - Monte Carlo Statistical Analysis for Uncertainty Ranges
  - Human Factors Analysis of Road User Detection and Response
  - Transportation Engineering Design and Limitations for Micromobility Vehicles on Sidewalks
  - EDR Vehicle Yaw and Steering Data Simulation, Analysis and Modeling
  - Contextual Evaluation of Slow-Moving Lead Vehicle Scenarios and Looming Calculations
  - Comprehensive Context Points for Collision Reconstructions

Forensic Pieces

- Low Light & Nighttime Photography, 2017

Institute of Transportation Engineers

- Traffic Signal Timing, 2026

Lightpoint Scientific

- Point Clouds in Collision Reconstruction: Speed from Video and Crush from Photos, 2022
- Speed from Video Analysis, 2024
- Blackbox and Beyond: An Exploration of Motorcycle Data Sources, 2025

Miami-Dade Public Safety Training Institute/ Input-Ace

- Forensic Video Analysis Training, 2019

Motorcycle Training Institute, Inc.

- Basic Rider Course, 2015

National Association of Professional Accident Reconstruction Specialists (NAPARS)

- Monte Carlo Analysis, 2023
- Nighttime Crash Scene Investigation and Human Factors, 2024
- Finding A/B Stiffness Values from NHTSA Data, 2025
- Pedestrian and Bicycle Crash Investigation, 2025
- Emergency Vehicle Crash Analysis, 2025
- CDR Pre-Crash Data Analysis, 2025
- Hydroplaning, 2026
- Occupant Kinematics, 2026

National Highway Institute (NHI)

- Automated Traffic Signal Performance Measures (ATSPM), 2024

Northwestern University Center for Public Safety

- Crash Investigation 1, 2013
- Crash Investigation 2, 2013
- Traffic Crash Reconstruction 1, 2013
- Traffic Crash Reconstruction 2, 2013
- Advanced Crash Reconstruction Utilizing Human Factors, 2014
- Motorcycle Crash Reconstruction, 2015
- Advanced Driver Assistance Systems (ADAS) for the Crash Reconstructionist, 2026

PDH Center

- Florida Professional Engineering Laws, Rules and Ethics, 2019
- Florida Professional Engineering Laws, Rules and Ethics, 2021
- Florida Professional Engineering Laws, Rules and Ethics, 2023
- Fundamentals of GPS Technologies, 2023
- Florida Professional Engineering Laws, Rules and Ethics, 2025

Society of Automotive Engineers (SAE)

- Applying Automotive EDR Data to Crash Reconstruction, 2013
- Applied Vehicle Dynamics, 2017
- Brake Control Systems, 2018
- Reconstruction and Analysis of Motorcycle Crashes, 2018
- Reconstruction and Analysis of Rollover Crashes of Light Vehicles, 2018
- Vehicle Crash Reconstruction: Principles and Technology, 2019
- Accident Reconstruction, The Autonomous Vehicle and Advanced Driver-Assistance Systems, 2020
- Driver Distraction from Electronic Devices: Insights and Implications, 2022
- Advanced Applications of Heavy Vehicle EDR Data, 2023
- Accident Reconstruction Microlearning Full Collection – EDR, CDR, and ADAS, 2024

University of Tulsa

- Digital Forensics of Heavy Vehicle Event Data Recorders, 2014

U.S. DOT Transportation Safety Institute

- U.S. Dot CMV Periodic Inspection and Maintenance, 2016

Virtual Crash

- Collision Simulation and Reconstruction, 2021

World Reconstruction Exposition (WREX)

- World Reconstruction Exposition (WREX), 2016
  - Vehicle Rollover Crash Testing Applied to Accident Reconstruction
  - Motorcycle Collision Reconstruction
  - Motorcycle and Speed Estimation Methods
  - Distracted Driving Investigation
  - Autonomous Driving
  - Pedestrian Collision Reconstruction
  - Crash Data Retrieval Update
  - Human Factors and Driver Response
- World Reconstruction Exposition (WREX), 2023
  - Video Analysis Reconstruction
  - Determining 85th Percentile Speed from Traffic Video
  - Underride Reconstruction and Regulations
  - GM EDRs
  - Sideswipe Analysis
  - Passenger Vehicle EDR Update
  - Motorcycle Rotational Mechanics
  - FCW and AEB Systems
  - Heavy Vehicle EDR Update
  - Heavy Vehicle Underride Speed Analysis

Seminar and Course Presentations

"Monte Carlo Statistical Analysis for Uncertainty Ranges", Focus Forensics, Fort Myers, FL 2025

"Human Factors for Driver Response", Focus Forensics, Sarasota, FL 2024

"Evidence Collection Technology and Digital Data Sources in Forensic Engineering Reconstruction", Luks, Santaniello, Petrillo, Cohen & Peterfriend, Orlando, FL 2021

"Accident Reconstruction in the Criminal Courts", *Florida Association of Criminal Defense Lawyers Conference*, Melbourne, FL 2018

Seminar and Course Presentations Continued

"Accident Reconstruction and Claims Management", *Fleet Safety Risk Control Workshop*, Jupiter, FL 2017

"Beating Vehicular Fraud with Forensic Investigation", *Florida Insurance Fraud Education Committee (FIFEC) Conference*, Orlando, FL 2016

"Maintenance of Traffic and Roadway Design Analysis", *World Reconstruction Exposition*, Orlando, FL 2016

"Hit-and-Run/ Uninsured Motorist Claims: The Proof is in the Damage" *Florida Insurance Fraud Education Committee (FIFEC) Conference*, Orlando, FL 2015

"Beating Fraud with Accident Reconstruction in Conjunction with the 'Black Box'" *Florida Insurance Fraud Education Committee (FIFEC) Conference*, Orlando, FL 2014

"Forensic Engineering – Beyond the Speed Limit", *GEICO Insurance Company*, West Palm Beach, FL 2014

Publications

Montalbano, P., Melcher, D., Keller, R., Rush, T., Przybyla, J., "Testing Methodology to Evaluate Reliability of a "Frozen" Speedometer Reading in Motorcycle/ Scooter Impacts with Pre-Impact Braking." SAE Technical Paper 2016-01-1482, 2016

Melcher, D., Rush, T., Przybyla, J., Keller, R., Montalbano, P., "Photogrammetric Reconstruction Methodology and Engineering Validation for Video-Captured Pedestrian Collisions", Proceedings of the 24th Annual Congress of the European Association for Accident Research and Analysis (EVU), 2015

"Design Concepts for Shape-Shifting Surfaces" Proceedings of the ASME 2011 International Design Engineering Technical Conferences, Washington, DC, Aug 29-31, 2011, DETC2011-47402

"Multistable Shape-Shifting Surfaces" Proceedings of the ASME 2012 International Design Engineering Technical Conferences, Chicago, IL, Aug 12-15, 2012, DETC2012-71159

"Multistable Shape-Shifting Surfaces (MSSSs)" University of South Florida Scholar Commons, Tampa, FL, Jan 1, 2012, http://scholarcommons.usf.edu/etd/4169/

Patents

- "Multistable shape-shifting surfaces" United States Patent 20120234508 A1, September 21, 2011
- "Ground Fault Circuit Interrupter" United States Patent D733,054, June 30, 2015