

Mathew Martonovich, PE

Forensic Engineering Expertise

Transportation Group Assistant Manager/Senior Forensic Engineer

Mr. Martonovich has over 16 years of experience in the Forensic Engineering field. His expertise spans areas involving passenger vehicle and commercial vehicle speed determination, mapping, crash/energy analysis, biodynamics, seat belts, and supplemental restraint systems, off-road vehicles and equipment, motorcycles, bicycles, pedestrians, site distance, highway design, work zone traffic control, signalization and signage, roadside safety and analysis, crash data recovery, heavy vehicle data recovery, commercial vehicle braking system compliance and in-service criteria, and more.

Product Design and Failure Analysis

Mr. Martonovich has expertise in the analysis of the failures of mechanical components of vehicle steering and braking, seat belts and supplemental restraints, IC engine failures, tow hitch assemblies, wheel failures, plumbing components, mechanical product design evaluation, and more.

Qualifications & Training

Professional engineering educational training courses covering:

- Basic through Advanced Collision Investigation
- Basic through Advanced Collision Reconstruction and Analysis
- Heavy Vehicle Crash Reconstruction
- Commercial Vehicle Air Braking Systems
- Electronic Logging Devices
- Vehicle Dynamics
- Motorcycle Dynamics and Impact Reconstruction
- Planer Impact Mechanics
- Rollover Crash Analysis
- Biomechanics
- Heavy Vehicle Event Data Recorder Recovery and Analysis
- Bosch Crash Data Retrieval (CDR), CDR Data Analysis and CDR
- Trainer/Mentor
- Collision Scene Diagramming
- Collision Visualization
- Photogrammetry for Collision Reconstruction
- Video Analysis
- High-Definition Survey Theory and Data Interpretation
- Full Scale Vehicle Performance Testing and Instrumentation
- Full Scale Vehicle Crash Testing and Instrumentation
- Work Zone Traffic Control and Highway Design
- Traffic Signal Analysis
- Berla iVe Vehicle Infotainment System Forensics
- Advanced Human Factors for Traffic Crash Reconstruction
- Vehicle Fire Investigation
- Failure Analysis
- Tire Failures
- Vehicle Braking Systems

Education

Master of Science in Civil Engineering
Focus in Transportation Engineering
University of Colorado, Denver, CO
2017

Bachelor of Science Degree in Mechanical Engineering Technology
Minor in Mathematics
Metropolitan State University of Denver, Denver, CO
2008

Licenses & Certifications

PE - Professional Engineer

Licensed by the State of Colorado – Number 51187
Licensed by the State of Wyoming – Number 15955
Licensed by the State of Idaho – Number 17176
Licensed by the State of South Dakota – Number 14438
Licensed in the State of Montana – Number PEL-PE-LIC-86158
Licensed by the State of Utah – Number 13079773-2202
Licensed by the State of New Mexico – Number 25964
Licensed by the State of Michigan – Number 6201309729
Licensed by the State of Indiana – Number PE12100279
Licensed by the State of Wisconsin – Number 48525-6
Licensed by the State of Minnesota – Number 62594
Licensed by the State of Nevada – Number 032462
Licensed in the State of Ohio – Number PE.88595
Licensed by the State of Tennessee – Number 132227
Licensed by the State of New York – Number 111948-01
Licensed by the State of Iowa – Number P30020

NAFE – National Academy of Forensic Engineers, Senior Member, Board Certified
Diplomate in Forensic Engineering by NAFE, a (CESB) Council of
Engineering and Scientific Specialty Boards Member Board

Full Accreditation as an Accident Reconstructionist

Accreditation Commission for Traffic Accident Reconstruction (ACTAR),
Registration Number 2491

Certified Traffic Control Supervisor, American Traffic Safety Services
Association (ATSSA), Certification 571208

FAA Certified Remote Pilot

US Department of Transportation, Federal Aviation Administration
FAA Part 61 Private Pilot - 4093126

CDR Technician Certification

Bosch Preferred Provider Crash Data Retrieval, December 2009

CDR System Operator Certification

Bosch Preferred Crash Data Analyst, December 2009

CDR Technician II Certification

Bosch Preferred Provider Crash Data Retrieval, January 2011

CDR Technician Trainer/Mentor

Bosch Preferred Provider Crash Data Retrieval, January 2011

Berla Certified Vehicle System Forensic Technician, CVST, March 2022

Berla Certified Vehicle System Forensic Examiner, CVSE, March 2022

Certified High-Definition Scanner Technician

Faro Technologies, Faro Focus 3D, May 2014
Aerial Surveying Robot Basic Operator Certification
MultiRotor Service Drone G4, April 2016
Certified Fire and Explosion Investigator, CFEI, September 2021
Certified Vehicle Fire Investigator, CVFI, September 2021

Employment History

Transportation Group Assistant Manager and Mechanical Group Supervisor
Nederveld, Inc.

August 2020 – Present

Responsible for the investigation, analysis and reconstruction of vehicle collisions, occupant safety, highway design, vehicle fires, plumbing system and vehicle/machine failures. Download and interpret electronic data from passenger vehicles, including airbag control modules. Mechanical inspections and documentation, product failure analysis, commercial vehicle inspections and commercial vehicle Electronic Control Module (ECM) download and interpretation. Rapid response for collision evidence documentation, vehicle inspections and scene surveys/documentation. Plan, execute, and compile High-Definition Survey (HDS) scans of vehicles, objects and incident scenes for precise measurement, documentation and visualization purposes. Plan, execute, and process aerial drone surveys and documentation of incident scenes and object. Supervision of associates in documentation, diagramming, animation and analysis of motor vehicle collision and other failure events. Conduct research, complete engineering calculations and analysis, prepare expert reports, develop conclusions, and provide forensics engineering testimony relative to results, findings, and conclusions.

President of Engineering Operations and Partner with OEC Forensics (a division of Ogden Engineering & Consulting, LLC)

2009 – July 2020 (OEC acquired by Nederveld, Inc., July 31, 2020)

Responsible for the investigation, analysis, and reconstruction of vehicle collisions, occupant safety, highway design, and vehicle/machine failures. Download and interpret electronic data from passenger vehicles, including airbag control modules. Mechanical inspections and documentation, commercial vehicle inspections and Electronic Control Module (ECM) download and interpretation of commercial vehicles. Rapid response for collision evidence documentation, vehicle inspections and scene surveys/documentation. Plan, execute, and compile High-Definition Survey (HDS) scans of vehicles, objects, and incident scenes for precise measurement, documentation, and animation purposes. Plan, execute, and process aerial drone surveys and documentation of collision scenes. Supervision of associates in documentation, diagramming, animation, and analysis of motor vehicle collision and other failure events. Conduct research, complete engineering calculations and analysis, prepare expert records, develop conclusions, and provide forensics engineering testimony relative to results, findings, and conclusions.

Professional Affiliations

Member: National Academy of Forensic Engineers
Member: Society of Automotive Engineers
Member: American Society of Mechanical Engineers
Member: National Society of Professional Engineers
Member: National Association of Professional Accident Reconstruction Specialists
Member: Tau Alpha Pi (Engineering Technology Honor Society)

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Member: Tau Beta Pi (Engineering Honor Society)

Publications

- Martonovich, M., Ogden J., Ingalls Z., Ogden C., "Incident Scene Documentation and Time Management Using the FARO Focus S350 Versus Conventional Measurement Techniques," White Paper for FARO Technologies, Inc., 2018.
- Martonovich M., Ogden J., "Forensic Engineering Analysis of Commercial Vehicle Air Brake System Performance," defended January 2018, The Journal of the National Academy of Forensic Engineers, Volume 35, No. 2, December 2018.
- Martonovich M., Ogden J., Engle C., "Applications of the G-DaTA2K™ System of Equations When Determining Total Velocity Change Resulting from Motor Vehicle Collisions," IMECE2016-65013, 2016 American Society of Mechanical Engineers Congress and Exposition, ©ASME 2016.
- Martonovich M., Ogden J., "Forensic Engineering Tools and Analysis of Heavy Vehicle Event Data Recorders (HVEDR)," defended June 2016, The Journal of the National Academy of Forensic Engineers, Volume 33, Number 2, December 2016.
- Martonovich M., "Method for Demonstrating Vehicle Lighting Conditions and Visibility of Nighttime Incidents," Accident Reconstruction Journal, Vol. 25, No. 6, November/December 2015.
- Martonovich M., Ogden J., Weimer Z., Kloberdanz K., "Information Analysis for the Collision Analyst," Collision Magazine, Volume 7, Issue 1, Spring 2012.
- Martonovich M., Ogden J., "Current Issues Affecting Passenger and Commercial Vehicle Event Data Recorders," InterACTION, The National Academy of Forensic Engineers, Vol. 22, No. 2, Fall/Winter 2011.
- Martonovich M., Ogden J., Weimer Z., Kloberdanz K., "Event Data Recorders and Evidence Spoliation: Avoiding Exposure," Colorado Claims, Volume 9, Number 3, October 2011.
- Martonovich M., Madden R., et al "ARC-CSI Crash Team Boot Camp Experience," Collision Magazine, Volume 6, Issue 2, Fall 2011.
- Martonovich M., Madden R., et al "ARC-CSI Crash Team Boot Camp Data Review," Collision Magazine, Volume 6, Issue 2, Fall 2011.

Books, Chapters, Instructional Materials and Scholarly Texts

- Ogden J., Martonovich M., "Electronic Data Recorders (EDR'S, ECU'S, Black Boxes)," Encyclopedia of Forensic Sciences, Third Edition, Volume 2, Pages 249-264, 2023.
- Martonovich M., "Measurement and Performance Analysis of Pneumatic Braking Systems on Heavy Vehicles," a Master of Science thesis, University of Colorado Denver, Denver, Colorado, defended December 8, 2017.

Expert Witness Experience

Courtroom Testimony

March 2025

Joseph A. Scott v. Denver Water and Adewale Williams, District Court, City and County of Denver, Colorado, Case No. 2024CV30503, A. Hernandez-Schlagel.

January 2025

People of the State of Wyoming v. Saviol Saint Jean, Sweetwater County Circuit Court of the 3rd Judicial District, Wyoming, Case No. 2024-CR-0087-L, J. Hampton.

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June 2024

Zachary Sparling v. Dusty Eggen, District Court, Douglas County, Colorado, 2023CV30873, A. Hernandez-Schlagel.

March 2024

The State of Colorado v. Jesus Puebla, 19th Judicial District Court of Colorado, 2022CR2022, J. Colgan.

October 2023

Lyle and Sandra Mages v. Picard Corporation, Inc., United States District Court for the District of Montana, CV-22-02-BLG-SPW-KLD, C. Voigt.

October 2023

Michael Guzman v. Kelsey James, 1st Judicial District Court of Wyoming, 2022-CV-200-597, C. Buchhammer.

September 2022

Donna Hampton v. Glenda McGrath and John Troxell, 7th Judicial District Court of Idaho, CV10-20-5373, T. Neill.

January 2022

Kerry & Wayne Rettinghouse v. James Martinson, 6th Judicial District Court of Wyoming, 39537, J. Gilbertz.

September 2021

Jahleene Davis v. Harriette Shankland, Colorado District Court, 2020CV31427, R. Booker.

October 2019

The State of Wyoming v. Raber, 6th Judicial District Court of Wyoming, 1603, D. Petersen.

June 2019

People v. Sheratt, Denver City and County, Colorado County Court 18M6989, Courtroom 3E, A. Ho.

June 2019

Gilbert v. Delgado, et. al., Denver County, Colorado District Court, 2018CV31679, Courtroom 275, R. Booker.

February 2019

The State of Wyoming v. Richardson, 7th Judicial District Court of Wyoming, 21174-B, D. Fuller.

October 2018

The State of Idaho v Paulson, 4th Judicial District Court of Idaho, CR01-17-47525, Courtroom 510, G. McCarthy.

July 2018

People v. Happel, Denver City and County, Colorado County Court, 17M08453, Courtroom 3A, M. Martin.

June 2018

People v. Buck, Yuma County, Colorado County Court 2016T108, Division 7, N. Schaefer.

October 2017

Moore/Clukey v. Martin, Adams County, Colorado District Court, 2016CV031806, Division W, E. Mayer.

December 2016

People v. Althoff, Denver City and County, Colorado County Court, 16M05058, J. Althoff.

December 2015

People v. Krebs-Brauer, Denver City and County, Colorado County Court, D252810, I. Posso.

Depositions

May 2025

Dalton Schafer v. Victor Perez and Champion Valley Cattle Company, LLC, Case no. 2024CV30003, S. Greenwood.

August 2024

Margaret Hildebrandt v. DES Express, LLC, Colorado District Court, 2023CV030751, M. Holycross.

May 2024

Mitchell Heath and Melissa Heath v. SS Welding & Oilfield Services, Inc., Miles Shiner, Dan's Tire Service, United States District Court of Utah, 200000017, R. Ammons.

May 2024

McLeod v. Santia and Roumaya, Circuit Court for the County of Iosco, Michigan, 22-3419-NI, S. Freel.

February 2024

Mitchell Heath and Melissa Heath v. SS Welding, Inc. Miles Shiner, Dan's Tire Service, US District Court of Utah, 200000017, R. Ammons.

November 2023

Kail and Cain v. Petra Trucking LLC, et. al., United States District Court of Wyoming, 22-CV-17-SWS, R. Koehmstedt.

March 2023

Maisha v. Brothers Truckline Corp., et. al, United States District Court of Wyoming, Case No. 20-CV-00087- ABJ, Z. Ward.

May 2022

Aimee Lingo and Bobby Lingo v. General Motors LLC, 1:21-CV-00115-MEH, United States District Court of Colorado, D. Krivit.

April 2022

Alderete v. Sunset Station Hotel and Casino, et. al. A-18-780938-3, Clark County District Court of Nevada, T. Peyton.

March 2022

Matyszczyk v. Traffic Safety Services, Adams & Croell, Inc., 20-CV-169-SWS, United States District Court of Wyoming, C. Reeves.

January 2022

Montoya v. E.W. Wylie & Kelm, United States District Court of Colorado, 20-CV-02535-KMT, J. Vucinovich.

September 2021

Steele v. Graves, United States District Court of Wyoming, 19-CV-103-F, P. Kapp.

March 2021

Cardoza v. Anthony, United States District Court of Wyoming, 19-CV-102-ABJ, S. Ortiz.

March 2021

Zurich v. Stewart & Stevenson, United States District Court of Colorado, 19-CV-03479, H. Scarbrorough.

October 2020

Clements v. Hassinger, 1st Judicial District, Laramie County, Wyoming, 192-080, R. Mincer.

July 2020

Collier v. Rodriguez, United States District Court of Wyoming, 19-CV-00201, W. Fix.

June 2020

Antunes v. Bikki, et al., District Court, Mesa County, Colorado, 2017-CV-118, L. Hiller.

April 2019

LaCoste v. Richard Huff, United States District Court of Wyoming, 18-CV-61-J, C. Stickley.

August 2018

Hurst v. Metropolitan Insurance, 4th Judicial District, Wyoming, CV2015-210, R. Lewis.

February 2016

Hollingsworth v. Charlotte Motor Speedway, et al, General Court of Justice, Cabarrus County, North Carolina, Superior Court Division 14-CVS-707, J. Gilreath.