DESIGN RESEARCH ENGINEERING
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B. NICHOLAS AULT, M.S., P.E.

Professional Specialization
Failure analysis/design evaluation of motor vehicle systems. Accident reconstruction and analysis of accident related issues for motor vehicles and automotive components including suspension systems and steering systems. Instrumentation, testing, and evaluation of automotive chassis systems through full-vehicle testing and associated data analysis. Computer modeling of full-vehicle testing and accident reconstruction. Certified Bosch Crash Data Retrieval Technician & Analyst.

Professional Background
B.S. (Mechanical Engineering), University of Missouri-Rolla, 2000, Summa Cum Laude
M.S. (Mechanical Engineering), Purdue University, 2004

Additional Engineering Courses / Seminars
- Traffic Crash Reconstruction - II, Northwestern University Traffic Institute
- Crash Data Retrieval Technician Course, Collision Safety Institute
- CDR System Data Analyst Certification Course, Collision Safety Institute
- EDR User's Summit, Crash Data Group – 2012, 2019
- HVE Forum, Engineering Dynamics Corporation – 2014, 2020
- Applying Automotive EDR Data to Traffic Crash Reconstruction, SAE
- Accessing and Interpreting Heavy Vehicle Event Data Recorders, SAE
- Introduction to Highly Automated Vehicles, SAE

Senior Project Engineer
Design Research Engineering
2014 to Present

Senior Engineer
Tandy Engineering & Associates, Inc.
2006 – 2014

Product Engineer, North American Truck Vehicle Dynamics
Ford Motor Company
2002 – 2006

Product Engineer, Ford College Graduate
Ford Motor Company
2000 – 2002

Member, Society of Automotive Engineers (SAE)
Member, Texas Society of Professional Engineers (TSPE)
Member, National Society of Professional Engineers (NSPE)

Professional Licenses
Registered Professional Mechanical Engineer, 2010, Texas #105860
Licensed Remote Pilot (Unmanned Aircraft Systems)

B. NICHOLAS AULT, M.S., P.E.

Publications

SAE Paper 2024-01-2646, "Side Impact Characteristics in Modern Light Vehicles", *SAE International Journal of Transportation Safety*, (with C. Parenteau, D. Toomey, R. Krishnaswami, and R. Burnett)

SAE Paper 2017-01-1416, "Application of Lateral Pole Impact Force-Displacement Data to the Reconstruction of Side Impacts with Narrow Objects", *SAE International Journal of Transportation Safety – V126-9* (with D. Toomey)

SAE Paper 2015-01-1416, "Applying Camera Matching Methods to Laser Scanned Three Dimensional Scene Data with Comparisons to Other Methods" (with C. Coleman, D. Tandy, Jr., & J. Colborn)

SAE Paper 2013-01-0748, "Objective Measurement of Vehicle Steering and Handling Performance When a Tire Loses Its Air", *SAE International Journal of Passenger Cars – Mechanical Systems – V122-6* (with D. Tandy, Jr., J. Colborn, & R. Pascarella)

SAE Paper 2012-01-0257, "Steering and Handling Performance Following a Full Tire Tread Belt Separation" (with D. Tandy, Jr. & R. Pascarella)

SAE Paper 2011-01-0973, "Steering and Handling Performance During a Full Tire Tread Belt Separation", *SAE International Journal of Passenger Cars – Mechanical Systems – V120-6* (with D. Tandy, Jr., R. Pascarella, C. Coleman, & K. Tandy)

SAE Paper 2010-01-0095, "The Response Characteristics of Several Vehicles Equipped with Electronic Stability Control to Violent Steering Demands on Different Surfaces" (with D. Tandy, Jr., K. Tandy, & R. Pascarella)

Presentations

"Application of Lateral Pole Impact Force-Displacement Data to the Reconstruction of Side Impacts with Narrow Objects", Society of Automotive Engineers, 2017 SAE World Congress, Detroit, Michigan, April 2017.