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Richard H. Gregg

Professional Specialization

Expertise includes analysis and research related to automotive restraint systems, including seat belts, air bags, seats, and child restraints; forensic investigations of vehicles and restraint systems for accident reconstruction and impact biomechanics analysis; performing surrogate/exemplar studies for analysis of restraint use or non-use, and occupant kinematics; and managing demonstrations and impact testing with vehicles and anthropomorphic test devices.

Past experience includes using biofidelic human body models and biomechanical force models to analyze and design vehicle packages and seats for improved safety and comfort; and consulting to manufacturers with respect to seat comfort, accommodation, and compliance with various Federal Motor Vehicle Safety Standards.

Education

Ph.D. Candidate (Biomedical Engineering), Wayne State University
M.S. (Biomedical Engineering), Wayne State University
B.S. (Mechanical Engineering), Kettering University (formerly GMI)
Traffic Accident Reconstruction, Northwestern University Traffic Institute

Professional Background

Senior Engineering Consultant

Design Research Engineering, Novi, Michigan
2022 – present

Senior Project Engineer

Design Research Engineering, Novi, Michigan
2011 - 2022

Project Engineer

Design Research Engineering, Novi, Michigan
2008 - 2011

Manager

Ergonomics Research Laboratory, Lansing, Michigan
2005 - 2008

Biomechanical Engineer

Ergonomics Research Laboratory, Lansing, Michigan
2000 - 2005

Engineer

M. P. Holcomb Engineering, Rochester Hills, MI
1995 - 2000

Engineer (Co-op Student)

CSX Transportation, Jacksonville, FL
1993 - 1995

Professional Affiliations

Member, Association for the Advancement of Automotive Medicine (AAAM)
Member, Society of Automotive Engineers (SAE)
Member (In-training), North American Spine Society (NASS)



Technical Paper Reviewer:

SAE Occupant Restraints and Biomechanics
SAE International Journal of Transportation Safety
SAE International Journal of Commercial Vehicles

Publications

- “Assessment of Collision Markings on Non-Used Vehicle Seat Belt Restraint Systems,” SAE International Journal of Advances and Current Practices in Mobility, 2(4):2092-2106, 2020, doi:10.4271/2020-01-0975 (with K. Petroskey)
- In Press: “Observational Study of Passenger Seat Belt Usage Rates on Shuttle Buses,” Society of Automotive Engineers, Paper 24SS-0182, 2024
- In Review: “Documentation of Fluid Evidence on Various Vehicle Components using Natural Light and Ultraviolet Light Exposure,” Society of Automotive Engineers, Paper 24SS-0056, 2024 (with K. Boysen, C. Parenteau, and D. Toomey)

Presentations

- “Physical Evidence of Seat Belt Use, Misuse, and Non-Use during Motor Vehicle Collisions,” Invited Lecturer, Wayne State University, Biomedical Engineering 8070, February 2, 2022.
- “Physical Evidence of Seat Belt Use, Misuse, and Non-Use during Motor Vehicle Collisions,” Invited Lecturer, Wayne State University, Biomedical Engineering 8070, October 19, 2021.
- “Physical Evidence of Seat Belt Use, Misuse, and Non-Use during Motor Vehicle Collisions,” Invited Lecturer, Wayne State University, Biomedical Engineering 8070, April 7, 2021.
- “Biomechanics of Car Crashes and Seat Belt Use,” National Autopsy Assay Group, Webinar, December 10, 2020.