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Richard H. Gregg

Professional Specialization

Expertise includes analysis and research related to automotive restraint systems, including seat belts, airbags, seats, and child restraints; forensic investigations of vehicles and restraint systems for accident reconstruction and impact biomechanics analysis; human injury mechanics and tolerance; 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, package design, occupant accommodation, and compliance with various Federal Motor Vehicle Safety Standards (FMVSS).

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

Association for the Advancement of Automotive Medicine (**AAAM**)

North American Spine Society (**NASS**)

Committee on Spinal Cord Injury (2023-present)

Committee on Innovative Spine Research and Novel Technologies (2023-present)

Society of Automotive Engineers (**SAE**)

Technical Paper Reviewer:

Occupant Restraints and Biomechanics

Occupant Protection: Integrated Safety Systems

International Journal of Transportation Safety

International Journal of Commercial Vehicles

SAEINDIA International Mobility Conference

Publications

Gregg, R.H. and Petroskey, K.J., “Assessment of Collision Markings on Non-Used Vehicle Seat Belt Restraint Systems,” SAE Int. J. Advances & Curr. Prac. in Mobility 2(4):2092-2106, 2020, doi:10.4271/2020-01-0975

Gregg, R.H., “Observational Study of Passenger Seat Belt Usage Rates on Shuttle Buses,” SAE Technical Paper 2024-01-2753, 2024, doi:10.4271/2024-01-2753.

Boysen, K., Parenteau, C., Toomey, D., and **Gregg, R.H.**, “Analysis of Fluid Evidence on Various Vehicle Components,” SAE Technical Paper 2024-01-2467, 2024, doi:10.4271/2024-01-2467

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.