DESIGN RESEARCH ENGINEERING
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KARLA J. PETROSKEY, P.E., M.S.E.

Senior Project Engineer

PROFESSIONAL SPECIALIZATION

Ms. Karla Petroskey is a licensed Professional Engineer with forensic engineering expertise in automotive accident reconstruction, automotive safety systems performance and failure analysis, occupant kinematics, biomechanics, and general mechanical engineering.

She holds a B.S. and M.S. in Mechanical Engineering from the University of Michigan. Ms. Petroskey has specific expertise in the design and performance analysis of occupant protection systems, including seat belts, air bags, child restraints, seats, and door latch systems. She also conducts accident analysis and reconstruction for passenger vehicles, including single- and multiple-vehicle collisions, rollover accidents, vehicle pedestrian incidents, and specialty vehicles.

EDUCATION

Ph.D. Candidate (Biomedical Engineering) Wayne State University
M.S.E. (Mechanical Engineering) University of Michigan
B.S.E. (Mechanical Engineering) University of Michigan

PROFESSIONAL BACKGROUND

Design Research Engineering, Senior Project Engineer, January 2024 – present
Explico, Managing Engineer/Senior Engineer, 2019-2023
Jensen Hughes, Senior Mechanical Engineer, 2018-2019
Design Research Engineering, Senior Project Engineer, 2012-2018
GE Energy, Engineer, 2011-2012
Design Research Engineering, Project Engineer, 2004-2011

PROFESSIONAL LICENSES AND CERTIFICATIONS

Licensed Professional Engineer, Michigan, # 6201059122
FAA remote pilot license/certificate, SUAS rating (Small Unmanned Airline System), #4162570
SAE Accident Reconstruction Certification

PEER-REVIEWED PUBLICATIONS

Jeffs S, Nolasco L, Petroskey K. Predicting Head Injury Metrics During Low- to Moderate-Speed Frontal Collisions Using Computational Simulations. Accident Analysis & Prevention, 2023.

Olberding J, Petroskey K, Leipold T. Coefficient of Restitution and Collision Pulse Duration in Low-Speed Vehicle-to-Barrier Impacts. Society of Automotive Engineers, SAE 2023-01-0624, 2003.

Figueroa J R, Kappler E, Petroskey K, Arndt S, Leipold T. Naturalistic Observations of Human Driving Perceptions and Vehicle Kinematics at Stop Sign-Controlled Intersections. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2022.

Funk C, Vozza A, Petroskey K. An Optimized Method for Mapping Headlamp Illumination Patterns. Society of Automotive Engineers, SAE 2021-01-0886, 2021.

Funk C, Petroskey K, Arndt S, Vozza A. Vehicle Specific Headlamp Mapping for Nighttime Visibility. Society of Automotive Engineers, SAE 2021-01-0880, 2021.

Sanders W, Petroskey K, Tibavinsky I, Vozza A. Validation of Telemetry Data Acquisition in Marine Environment., Society of Automotive Engineers SAE 2021-01-0897, 2021.

Gregg R, Petroskey K. Assessment of Collision Markings on Non-Used Vehicle Seat Belt Restraint Systems. SAE Int. J. Advances & Curr. Prac. In Mobility 2(4):2094-2106, 2020.

PEER-REVIEWED PUBLICATIONS (CONTINUED)

Campbell J, Petroskey K. Accuracy of Anthropometric Scaling: Using Stature to Estimate Body Segment Lengths. Society of Automotive Engineers, SAE 2020-01-0523, 2020.

Petroskey K, Funk C, Tibavinknsy I. Validation of Telemetry Data Acquisition using GoPro Cameras. Society of Automotive Engineers, SAE 2020-01-0875, 2020.

Petroskey K, Kilma M, Paddock E. Evaluation of Door Latch Response to Vertical Loading Conditions. Society of Automotive Engineers, SAE 2009-01-0397, 2009.

PRESENTATIONS AND PUBLISHED ABSTRACTS

Jeffs S, Demma D, Petroskey K, Bland M, Rundell S. Computational Simulation of Sideswipe Collision to Predict Head Injury Metrics, XXVIII Congress of the International Society of Biomechanics, 2021.

Paper Presentation, Validation of Telemetry Data Acquisition using GoPro Cameras. SAE WCX 2020 Conference. Detroit, Michigan, USA

Guest Lecturer, BME 4309 Forensic Engineering Course, Lawrence Technological University, 2019, 2023

PROFESSIONAL AFFILIATIONS

Society of Automotive Engineers (SAE)
Technical Paper Reviewer

Association for the Advancement of Automotive Medicine (AAAM)
Member, AAAM Safety Motorcyclist Safety special interest group
Member, AAAM Global Child and Youth Road Safety special interest group

Biomedical Engineering Society
Technical Paper Reviewer