EXPLICO
ENGINEERING

KARLA PETROSKEY, MSE, PE

Accident Reconstruction | Restraint Systems

EDUCATION

WAYNE STATE UNIVERSITY

- **PhD,** Biomedical Engineering, Expected 2022

UNIVERSITY OF MICHIGAN

- **MSE,** Mechanical Engineering, 2007
- **BSE,** Mechanical Engineering, 2004

LICENSES & CERTIFICATIONS

- Professional Engineer, State of Michigan
- FAA Remote Pilot

AFFILIATIONS

- Society of Automotive Engineers (SAE)
- Association for the Advancement of Automotive Medicine (AAAM)
- Biomedical Engineering Society (BMES)

PROFESSIONAL PROFILE

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

Ms. Petroskey is currently working toward a Ph.D. in Biomedical Engineering from Wayne State University, with a focus on impact biomechanics.

AREAS OF EXPERTISE

- Restraint System Use, Nonuse and Misuse
- Child Restraints
- Accident Reconstruction
- Rollovers
- Motorcycles
- Pedestrian-Vehicle Incidents
- Airbags
- Automotive Door Latch Systems
- Occupant Kinematics
- Biomechanics
- Product Liability

CONTACT INFORMATION

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EXPERIENCE

- **Explico Engineering**
  Senior Engineer — 2019-Present

- **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

PEER REVIEWER

- Society of Automotive Engineers

PEER-REVIEWED PUBLICATIONS

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

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

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

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

PROFESSIONAL DEVELOPMENT

■ **Society of Automotive Engineers**

Vehicle Crash Reconstruction: Principles and Technology
Accident Reconstruction, the Autonomous Vehicle, and ADAS
Reconstruction and Analysis of Motorcycle Crashes
Reconstruction and Analysis of Rollover Crashes
Applying Automotive EDR Data to Traffic Crash Reconstruction
Motor Vehicle Accident Reconstruction

■ **Northwestern University Center for Public Safety**

Traffic Accident Reconstruction

■ **HVE**

Forum, 2005
Forum, 2016

PRESENTATIONS

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

Guest Lecturer, BME 4309 Forensic Engineering, Lawrence Technological University, 2019.