

# The Eye, the Brain and The Auto 2026 Program schedule

Monday, October 26, 2026

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| 7:00 – 8:00 a.m.   | <b>Continental breakfast</b>                                                                                                                                                                                                                                                                          |
| 8:00 - 8:05 a.m.   | <b>Welcome &amp; Introduction</b><br>Nauman Imami, M.D., M.H.S.A, Chair, Henry Ford Health, Department of Ophthalmology, Detroit, Michigan<br><b>Housekeeping announcements</b><br>David J. Goldman, M.D., M.B.A., Director, Detroit Institute of Ophthalmology, Henry Ford Health, Detroit, Michigan |
| 8:05 - 8:15 a.m.   | <b>Introduction to Conference and Introduction to Keynote Speaker</b><br>Cynthia Owsley, Ph.D., University of Alabama at Birmingham, Alabama                                                                                                                                                          |
| 8:15 – 9:15 a.m.   | <b>Keynote address: <i>Naturalistic Driving at a Crossroads: What We've Learned, What We've Missed, and Where We Go Next</i></b><br>Dan McGehee, Ph.D., University of Iowa, Iowa<br><br><b>Session 1: Cognition</b><br>Moderator: Joseph Rizzo, M.D., Harvard University, Boston, Massachusetts       |
| 9:15 – 9:45 a.m.   | <b><i>Naturalistic Driving as a Potential Cognitive Biomarker</i></b><br>Sayeh Bayat, Ph.D. University of Calgary, Canada                                                                                                                                                                             |
| 9:45 – 10:15 a.m.  | <b><i>Naturalistic Driving and Functional Changes Along the Alzheimer Disease Continuum</i></b><br>Ganesh Babulal, Ph.D., Mayo Clinic, Rochester, Minnesota                                                                                                                                           |
| 10:15 – 10:30 a.m. | Break                                                                                                                                                                                                                                                                                                 |
| 10:30 – 11:00 a.m. | <b><i>When Familiarity Masks Impairment: Route Familiarity and Naturalistic Driving in Older Adults with Mild Cognitive Impairment</i></b><br>Ranuki Hettiarachige, Ph.D., University of Calgary, Canada                                                                                              |
| 11:00 – 11:30 a.m. | <b><i>Naturalistic Driving as a Real-World Behavioral Assay for Health Digital-Twin Modeling in Cognitive Aging</i></b><br>Aparna Joshi, B.S., Iowa State University, Iowa                                                                                                                            |
| 11:30 – 12:00 a.m. | <b><i>Naturalistic Driving Exposure and Longitudinal Executive Function Change in Older Adults</i></b><br>Matthew Rizzo, Ph.D., University of Nebraska Medical School, Nebraska                                                                                                                       |
| 12:00 – 12:30 p.m. | <b><i>Telematic Tools for Older Driver Transitioning</i></b><br>Rosamund Gianutsos, Ph.D., Sunnyside, New York                                                                                                                                                                                        |

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| 12:30 – 1:30 p.m. | Lunch                                                                                                                                                                                                      |
|                   | <b>Session 2: Vision and Aging</b><br>Moderator: Joanne Wood, Ph.D. Queensland University of Technology,<br>Brisbane, Australia                                                                            |
| 1:30 – 2:00 p.m.  | <b><i>Real-World Driving Behaviors in Individuals with Homonymous Visual Field Loss: Insights from a Naturalistic Driving Study</i></b><br>Seonggyu Choe, Ph.D., Harvard University, Boston, Massachusetts |
| 2:00- 2:30 p.m.   | <b>Effects of Intersection Familiarity on Head Scanning in Naturalistic Driving</b><br>Seonggyu Choe, Ph.D., Harvard University, Boston, Massachusetts                                                     |
| 2:30 – 3:00 p.m.  | <b><i>Head Scanning by Drivers with Homonymous Visual Field Loss: a Naturalistic Driving Study</i></b><br>Alex Bowers, Ph.D., Harvard University, Boston, Massachusetts                                    |
| 3:00 – 3:15 p.m.  | Break                                                                                                                                                                                                      |
| 3:15 – 3:45 p.m.  | <b><i>Real-World Experience and Emerging Naturalistic Evidence of Tesla Automation Use in Vision Impairment</i></b><br>Jing Xu, Ph.D., Harvard University, Boston, Massachusetts                           |
| 3:45 – 4:15 p.m.  | <b><i>Crash/Near-Crash Risk Across Vehicle Specifications Using Naturalistic Driving Data</i></b><br>Charlie Klauer, Ph.D., Virginia Tech, Virginia                                                        |
| 4:15 – 4:45 p.m.  | <b><i>Naturalistic Driving Trajectories Preceding Driving Cessation in Older Adults: A Prospective Cohort Study</i></b><br>Ganesh Babulal, Ph.D., Mayo Clinic, Rochester, Minnesota                        |

## Evening Program:

6:00 – 9:00 p.m.      Bartimaeus Dinner – Reservations required

Tuesday, October 27, 2026

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| 7:00 – 7:55 a.m. | <b>Continental breakfast</b>                                                                                                               |
| 7:55 – 8:00 a.m. | <b>Housekeeping announcements</b><br>David J. Goldman, M.D., M.B.A, Director, HFH Detroit Institute of<br>Ophthalmology, Detroit, Michigan |
|                  | <b>Session 3: Device Development and Analytics</b><br>Moderator: XXX                                                                       |

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| 8:00 – 8:30 a.m.   | <p><b><i>To Capture Safety Events in Naturalistic Driving using Video Telematics Devices – a Pilot Comparison Study with Tesla</i></b></p> <p>Gang Luo, Ph.D., Massachusetts Eye and Ear, Harvard University, Boston, Massachusetts</p>                                                                                                                 |
| 8:30 – 9:00 a.m.   | <p><b><i>Developing a Data Acquisition System for Measuring Naturalistic Driving to Study Functionally - or Medically Impaired Drivers</i></b></p> <p>Gerald McGwin, Ph.D., University of Alabama at Birmingham, Alabama</p>                                                                                                                            |
| 9:00 – 9:30 a.m.   | <p><b><i>Neuro-Visual Adaptive Driving Systems (NVADS): A Naturalistic Driving Approach to Integrating Ophthalmologic and Neurological Intelligence into Automotive Safety Systems</i></b></p> <p>Tim Cavanaugh, M.B.A., Michigan Consulting, Detroit, Michigan</p>                                                                                     |
| 9:30 – 10:00 a.m.  | <p><b><i>Participant-Level Trip Filtering in Naturalistic Driving Studies Using In-Cabin Face Embeddings</i></b></p> <p>Omar Hassanin, M.Eng., University of Calgary, Canada</p>                                                                                                                                                                        |
| 10:00 - 10:15 a.m. | Break                                                                                                                                                                                                                                                                                                                                                   |
| 10:15 – 10:45 a.m. | <p><b><i>Seeing the Signs Before the Crash: A Smartphone and Vision-Integrated AI Framework for Early Detection of Cognitive Decline in Older Drivers</i></b></p> <p>Phillip Olla, Ph.D., University of Detroit Mercy, Detroit, Michigan</p> <p>Joelle Olla, B.Sc., Cognitive Health and Aging Lab, University of Windsor, Windsor, Ontario, Canada</p> |
| 10:45 – 11:15 a.m. | <p><b><i>Recovering the Hidden Dimensions of Driver Distraction from Naturalistic Data Streams: A Covariance-Based, Individual-Differences Analytic Approach, with Cell-Phone Conversation as a Worked Example</i></b></p> <p>David Peterzell, Ph.D., Fielding Graduate University</p>                                                                  |
| 11:15 – 11:45 p.m. | <p><b><i>Validating an Error-State Kalman Filter for High Confidence Modeling of Naturalistic Driving Behavior in the DRIVES Cohort</i></b></p> <p>David Brown, Ph.D., Mayo Clinic, Rochester, Minnesota</p>                                                                                                                                            |
| 11:45 – 12:15 p.m. | <p><b><i>An Interpretable Crash and Near-miss Detector from Vehicle Inertial Sensors: Physical Readouts and Transfer to Naturalistic Driving</i></b></p> <p>Subrata Pal, Ph.D., Washington University, St. Louis, Missouri</p>                                                                                                                          |
| 12:15- 1:00 p.m.   | Lunch and Final Discussions                                                                                                                                                                                                                                                                                                                             |
| 1:00 – 1:15 p.m.   | Wrap up and Departure                                                                                                                                                                                                                                                                                                                                   |