



AAAM 67th Annual Conference Program Schedule

Student Symposium

Tuesday, October 6, 2023

12:30 – 1:00 PM: Student Symposium Welcome & Keynote Address - AAAM Clay Gabler Awardee: The Influence of Subject-Specific Lumbar Spine Geometry and Bone Properties on Injury-Related Biomechanical Measurements - Sophia Tushak

Session 1 - Naturalistic Driving

1:00 PM - Modeling Driver Behaviors in Intersections Based on Real-World Intersection Traversals from Large-Scale Naturalistic Driving Data in the U.S. - Katelyn Kleinschmidt

1:15 PM - Computational Literature Review of Naturalistic Driving Studies: Identifying Research Priorities - Fletcher Howell

Session 2 - Injury Biomechanics

1:45 PM - A Methodology to Determine Local Ankle Injury Tolerances - Junior Noss

2:00 PM - Injury Patterns in Motor Vehicle Collision-Youth Pedestrian Deaths - Moheem Halari

2:15 PM - Redesigning an Anthropomorphic Test Device (ATD) Lumbar Spine to Better Model 'Submarining' in Motor Vehicle Crashes - Mohsen Hatami

2:30 PM - Using Real-World Crash Data to Predict the Number of Occupant Rib Fractures - Edward Shangin

Session 3 - Vulnerable Road Users

3:00 PM - Acoustic Characterization of Vehicle-Pedestrian Impact - Ayush Mehta

3:15 PM - Advanced vehicle technologies and vehicle purchasing decisions for older Australians: a discrete choice experiment - Helen Nguyen

3:30 PM - Analysis of Fatal Bicycle Crashes for Bicycle Scenario Testing - Eugene Crump IV

3:45 PM - User-Centric Solutions to Increase Use of Booster Seat and Appropriate Use of Adult Seat Belts Among Children - Stacie Powell

4:10 PM - Student Speed Mentoring

5:30 PM - Welcome Reception

General Conference

Wednesday, October 4, 2023

8:00 AM - Welcome & Conference Opening

8:15 AM - Keynote Address: Transportation Outside of the Vehicle: A Conversation about the Ways Emerging Technologies Across the Transportation Spectrum Are Changing Lives - Mary Pat McKay

This keynote will touch on the edges of vehicle transportation including commuter rail and positive train control, the investigation of accidents involving emerging technologies, and the future of trip-based research.

Session 1: Pediatric/Children 1

9:30 AM - Sociodemographic Disparities in Child Restraint Use and Variation in Child Passenger Safety Information Sources - Emma Sartin ([View Paper](#))

9:50 AM - Financial status and travel time to driving schools as barriers to obtaining a young driver license in a state with comprehensive young driver licensing policy - Xiaoxia Dong ([View Paper](#))

10:10 AM - US Caregivers' Attitudes and Risk Perceptions towards Pediatric Vehicular Heatstroke: A National Survey - Emma Sartin ([View Paper](#))

10:30 AM - Assessment of pediatric shoulder range of motion to evaluate the biofidelity of the Large Omni-directional Child (LODC) Anthropomorphic Test Device (ATD) shoulder design - Matthew Isakson ([View Paper](#))

11:15 AM – 12:00 PM: Global Child and Youth Road Safety SIG Session - The Road Safety Experts' Journey: Protecting Kids from Concept to Practice - Julie Mansfield with Emily Thomas; Schuyler St. Lawrence; Eric Dahle

Session 2: Pediatric/Children 2

1:15PM - Child Occupant Safety in Unconventional Seating for Vehicles with Automated Driving Systems - Kyle Boyle ([View Paper](#))

1:35PM - Comparison of Child and ATD Belt Fit and Posture On Belt-Positioning Boosters During Self-Selected, Holding Device, and Nominal Conditions - Gretchen Baker ([View Paper](#))

1:55PM - Frontal-oblique Impact Sled Tests of a Rearward-facing Child Restraint System with and without the Support Leg - Declan Patton ([View Paper](#))

2:15PM - The Effect of Reclined Seatback Angles on the Motion of Booster-Seated Children During Lateral-Oblique Low-Acceleration Impacts-Valentina Graci ([View Paper](#))

2:35PM - Effect of Naturalistic Seating Postures and Seatbelt Routing on the Kinematics and Kinetics of a Booster-Seated Q6 ATD in Frontal Impacts-Declan Patton ([View Paper](#))

Session 3: Safety Potpourri 1

3:10 PM - Driver Head Kinematics in Grassroots Dirt Track Racing Crashes - Sophia Zoch ([View Paper](#))

3:30 PM - Integrating Biomechanics with Stakeholder Perspectives to Inform Safety in Grassroots Dirt Track Racing - Jillian Urban ([View Paper](#))

3:50 PM - Regional Brain Strain Dependence on Direction of Head Rotation - Tyler Rooks ([View Paper](#))

4:00 PM - Kinematic Cues in Driver-Pedestrian Communication to Support Safe Road Crossing - Thomas Noonan ([View Paper](#))

4:20 PM - Evaluation of neural machine translation for conversion of International Classification of Disease codes to the Abbreviated Injury Scale - Thomas Hartka ([View Paper](#))

Session 4: Safety Potpourri 2

4:50 PM - A Case-Control Study of the Impact of Automated Speed Enforcement on Motorist Speeds and Speeding Violations in Rwanda - Elizabeth Krebs

5:00 PM - Kinematic Response of Volunteers in Various Reclined Postures Subjected to a Pre-crash Braking Pulse - Maria González-García ([View Paper](#))

5:10 PM - Upper Cervical Spine Bone Mineral Content Variations in Elderly Females: Implications for Injury Mechanisms, Tolerance, and Autonomous Vehicles Environments - Yoganandan Narayan

5:20 PM - Computed Tomography Assessment of Pelvic Bone Density: Associations with Age and Pelvic Fracture in Motor Vehicle Crashes - Ashley Weaver ([View Paper](#))

Session 5: Poster Presentations

5:35 PM - (1) Vulnerable Road Users Crashes: Injuries and Impairment - Alicia Chavez

5:37 PM - (2) Visual Function and Driving Performance of Drivers Aged 65 or Older in Three Lighting Conditions - Jingzhen Yang

5:39 PM - (3) Perceived Cognitive Load in Young Drivers Acutely Post Mild Traumatic Brain Injury - Benjamin McManus

5:41 PM - (4) Characteristics of young drivers who failed to complete a simulated driving assessment acutely after traumatic brain injury - Vishaka Kalra

5:43 PM - (5) Comparison of characteristics of road traffic injuries by road user type among children and adolescents in South Korea - Sangchul Kim

5:45 PM - (6) An Anthropometric Evaluation of Child Occupant Safety Policy in the United Arab Emirates - Muhammad Uba Abdulazeez

5:47 PM - (7) Hospital Length of Stay Prediction for Children Involved in Road Traffic Crashes - Muhammad Uba Abdulazeez

5:49 PM - (8) Design and usability evaluation of Risk-ATTEND - an updated version of a computer-based risk anticipation training program - Anuj Pradhan

5:51 PM - (9) Comparison of the Mental Representation of Traffic Signs in Ecuador: Informative signs and Warning signs - Francisco Lopez-Valdes

General Conference

Thursday, October 5, 2023

7:30 AM – Poster Viewing/Continental Breakfast

8:00 AM – Keynote Address: Waymo's Safety Impact Research – Trent Victor

Session 6: Impaired Driving

9:15 AM - Predicting Changes in Driving Performance in Cannabis Users Following Acute Use Based on Self-reported Readiness to drive - Ryan Miller

9:35 AM - Longitudinal Perspectives of Riding with a Cannabis-Impaired Driver - Barbara C. Banz ([View Paper](#))

9:45 AM - Do Adolescent Trajectories of Riding with an Impaired Driver and Driving Impaired Predict Similar Behaviors in Early Adulthood? - Federico Vaca ([View Paper](#))

9:55 AM - Shared and Distinct Parental Influences on Teen Impaired Driving in Rural and Suburban Contexts: A Mixed Methods Study of Young Drivers - Barbara C. Banz

10:05 AM - Driving performance Acutely After mTBI Among Young Drivers - Thomas Kerwin

Session 7: Collisions Injuries and Mortality 1

10:30 AM - Sex-based Differences in Odds of Motor Vehicle Crash Injury Outcomes - Matthew Craig

10:50 AM - A decomposition of the effects of the COVID-19 pandemic on changes in the motor vehicle collision-related mortality rate in Alabama - Russell Griffin ([View Paper](#))

11:10 AM - Assessing the impact of road safety agencies and health systems in traffic outcomes across 146 countries, 1994-2012 - Jose Ignacio Nazif-Munoz ([View Paper](#))

11:30 AM - Passenger and Heavy Vehicle Collisions with Pedestrians: Assessment of Injury Mechanisms and Risk - Angela Schubert ([View Paper](#))

Session 8: ADAS, ADAS & Motorcycles, Motorcycles 1

1:15 PM - Analyzing traffic conflicts and the behavior of motorcyclists unsignalized three-legged and four-legged intersections in Cartagena, Colombia - Holman Ospina Mateus ([View Paper](#))

1:35 PM - Identifying Fundamental Intersection Crash Types for I-ADAS and ADS Test Scenarios - Laurence Bangert

1:55 PM - Does ABS ensure good performance in emergency braking for less skilled motorcyclists? - Giovanni Savino ([View Paper](#))

2:15 PM - Developing a Motorcycle Injury Risk Model for Planar Collisions: Insights from the Motorcycle Crash Causation Study - Paolo Terranova ([View Paper](#))

2:25 PM Characteristics of Automatic Emergency Braking responses in passenger vehicles evaluated in the IIHS Front Crash Prevention program - David Kidd ([View Paper](#))

2:55 PM – 3:40 PM: Automated Vehicles SIG Session - Vehicle Automation and the Impact on Other Road Users - Kristofer Kusano; David Kidd; Zach Noonan

Session 9: ADAS, ADAS & Motorcycles, Motorcycles 2

3:45 PM - Frequency and Quality of Exposure to ADAS and Impact on Trust, Workload, and Mental Models - Anuj Pradhan ([View Paper](#))

4:05 PM - How Can Front Crash Prevention Systems Address More Police-Reported Crashes in the United States? - David Kidd ([View Paper](#))

4:25 PM - Motorcycle Emergency Steering Assistance: A Systematic Approach From System Definition To Benefit Estimation and Exploratory Field Testing - Mirco Bartolozzi ([View Paper](#))

4:50 PM: Annual Business Meeting

6:00 PM: Presidents Reception

7:00 PM: Awards/Recognition Dinner

General Conference

Friday, October 6, 2023

Session 10: Collisions Injuries and Mortality 2

8:00 AM - Evaluation of a full-face, open-face and airbag-equipped helmet for facial impact protection - Benjamin Shurtz ([View Paper](#))

8:20 AM - Optimizing Frontal Impact Occupant Protection Systems for Passengers Seated in Wheelchairs - Kathleen Klinich

8:40 AM - Analysis of Experimental Injuries to Obese Occupants with Different Postures in Frontal Impact - Yoganandan Narayan ([View Paper](#))

8:50 AM - The effect of seatbelt pre-tensioners and load limiters in the reduction of MAIS2+ and MAIS3+ real-world injuries in frontal crashes - Manuel Valdano ([View Paper](#))

9:10 AM Evaluation of the Effectiveness of Non-contact Respiration Rate Detection for Post-Crash Care Application - Sparsh Jain

Session 11: Modeling 1

9:30 AM - Understanding the New Trends in Pedestrian Injury Distribution and Mechanism through Data Linkage and Modeling - Jingwen Hu ([View Paper](#))

9:50 AM - Bridging The Gap: Development of Frontal Crash Mode ATD analogous Human Body Models - Seth Mischo

10:10 AM - THOR-05F Biofidelity Evaluation in Reclined and Upright Seated Postures Subjected to Frontal Crash Pulses - Hans Hauschild ([View Paper](#))

10:30 AM - Assessment of Finite Element Human Body and ATD Models in Estimating Injury Risk in Far-Side Impacts using Field-Based Injury Risk - Karan S. Devane ([View Paper](#))

10:50 AM - Predicting Head Injury Metrics During Low- to Moderate-Speed Frontal Collisions Using Computational Simulations - Shaun Jeffs

Session 12: Modeling 2

11:10 AM - Effect of Muscle Activation Scheme in Human Head-Neck Model on Estimating Cervical Spine Ligament Strain from Military Volunteer Frontal Impact Data - Jesse Gerringer ([View Paper](#))

11:30 AM - Comparison of Thoracolumbar Spine Kinematics and Injuries in Reclined Frontal Impact Sled Tests Between Mid-Size Adult Female and Male PMHS - Jeessoo Shin

11:50 AM - Development and Preliminary Validation of Computationally Efficient and Detailed 50th Percentile Female Human Body Models - Andrea Robinson ([View Paper](#))

12:10 PM - Preliminary Validation of the GHBMC Average Male Occupant Models and 70YO Aged Model in Far-Side Impact - Bharath Koya ([View Paper](#))

12:20 PM: Conference Closing Remarks