RCCADS Public Workshop

Wednesday, May 25, 2022

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WORKSHOP AGENDA

8:00 - 8:10 **Welcome, Opening Remarks, and Logistics**

8:10 - 8:55 Session 1: Collaborative Efforts Related to AV Occupant Safety

8:10 **RCCADS Overall Updates**
Allison Kender, HyunJung Kwon, Ph.D | Transportation Research Center Inc.
*(Slides available after the presentation)**

8:25 **Result Overview of the EU Project OSCCAR**
Werner Leitgeb | Virtual Vehicle Research

8:45 **Panel Q&A and Discussion**

8:55 - 9:05 **Break**

9:05 - 10:45 Session 2: AV and Reclined Occupant Biomechanics
Moderator: Yun Seok Kang, Ph.D | The Ohio State University

9:05 **Understanding Reclined Small Occupants' Kinematics in Sled-Simulated Frontal Crashes**
Valentina Graci, Ph.D | Children's Hospital of Philadelphia
Valentina Graci[1], Hans Hauschild[2], Jalaj Maheshwari[1], John Humm[2] | 1: Children's Hospital of Philadelphia, 2: Medical College of Wisconsin

9:25 **Small Female and Obese Occupant Response to Frontal Impacts in a Reclined Seated Posture**
John Humm, Ph.D | Medical College of Wisconsin
John Humm, Sagar Umale, Hans Hauschild, Karthik Somasundram, Frank Pintar, Narayan Yoganandan | Medical College of Wisconsin

9:45 **Comparison of Injury Risk Prediction in Reclined Frontal Crashes: Hybrid III vs THOR****
Jason Kerrigan, Ph.D | University of Virginia
Jeesoo Shin, John Paul Donlon, Rachel Richardson, Bronek Gepner, Jason Forman, Jason Kerrigan | University of Virginia Center for Applied Biomechanics
*(Slides available after the presentation)**

10:05 **Biofidelity Evaluation of THOR-AV in Various Test Configurations**
Jerry Wang, Ph.D | Humanetics Innovative Solutions, Inc.
Z. Jerry Wang[1], Olivier Richard[2], Matthieu Lebarbé[3], Jérôme Uriot[3], Lauren Zaseck[4], Matthew Reed[4], Erdem Kabadayi[1], Christian Kleessen[1] | 1: Humanetics Innovative Solutions, Inc., 2: Faurecia Automotive Seating, France, 3: C.E.E.S.A.R., France, 4: The University of Michigan Transportation Research Institute

10:25 **Panel Q&A and Discussion**

10:45 - 10:55 **Break**

***Slides available after the presentation**
****RCCADS-funded project**

10:55-12:55 Session 3: Virtual Testing for AV Occupant Safety & Virtual Testing Best Practices

Moderator: Bengt Pipkorn, Ph.D | Autoliv

10:55 **Critical Factors Influencing Pelvis Motion and Lap-Belt to Pelvis Interaction for Occupants of Automated Vehicles****

Bronislaw Gepner, Ph.D | University of Virginia Center for Applied Biomechanics

Bronislaw Gepner, Rachel Richardson, Sang-Hyun Lee, Jason Kerrigan, Jason Forman | University of Virginia Center for Applied Biomechanics

11:15 **Effects of Seat Recline Angle on Rear-Facing Seat Occupant Injury Risks During Frontal Crashes****

Yunzhu Meng | Center for Injury Biomechanics, Virginia Tech

Yunzhu Meng[1], Yogesh Surkutwar[1], Andrew Kemper[1], Yun Seok Kang[2], Warren Hardy[1], John Bolte[2], Costin Untaroiu[1] | 1: Center for Injury Biomechanics, Virginia Tech, 2: Injury Biomechanics Research Center, The Ohio State University

11:35 **Reclined Seating: Postural Variations and Associated Risks Assessed by Simulation**

Philippe Beillas, Ph.D | Univ. Eiffel – Univ Lyon 1 (Lyon, France)

Cyrille Grébonval[1], Xuguang Wang[1], Philippe Petit[2], Xavier Trosseille[2], Pascal Baudrit[3], David Poulard[3], Philippe Beillas[1] | 1: Univ. Eiffel – Univ Lyon 1, (Lyon, France), 2: LAB PSA Peugeot Citroën Renault (Nanterre, France), 3: C.E.E.S.A.R (Nanterre, France)

*(Slides available after the presentation)**

11:55 **Development of Best Practices for Gravity Settling and Belting Human Body Models for Use in Virtual Test Environments**

Scott Gayzik, Ph.D | Wake Forest University School of Medicine, Center for Injury Biomechanics

B.W. Von Kleeck[1], J.M. Caffrey[1], A.A. Weaver[1], J. Hallman[2], F.S. Gayzik[1] | 1: Wake Forest University School of Medicine, Center for Injury Biomechanics, 2: Toyota Motor North America, Toyota Collaborative Safety Research Center (CRSC)

12:15 **Validation Procedure for a Vehicle Environment Model to be used for HBM-based Virtual Testing as Developed in OSCCAR**

Andre Eggers, Ph.D | BASt

Steffen Peldschus[1], Andre Berger[2], Andre Eggers[3] | 1: LMU, 2: ESI

*(Slides available after the presentation)**

12:35 **Panel Q&A and Discussion**

12:55-1:05 **Closing Remarks**

**Slides available after the presentation*

***RCCADS-funded project*