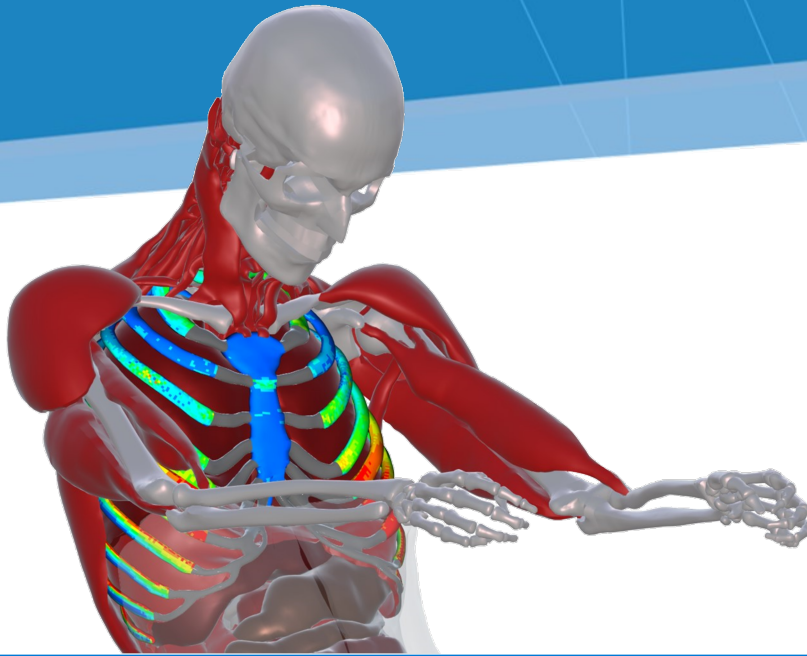


W E L C O M E

to the



2022 GHBMC Users' Workshop

Hosted by:



Elemance

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GHBMC

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Program

07:45-08:45am Registration Open (Coffee & Breakfast in the Atrium)

08:45-09:00am Introduction (Elemance)

09:00-09:20am State of the GHBMC

09:20-10:20am Session I

Is a Lower Crash Speed Needed for Restraint Design Optimization for an Urban Ridesharing Environment?

Jingwen Hu, Kyle Boyle, Andrew Leslie, Carol Flannagan, Chin-Hsu Lin, Raymond Kiefer
University of Michigan Transportation Research Institute (Ann Arbor, MI, USA), General Motors

**Public Transit Bus Occupant Response in Frontal Impacts Assessed Using Human Body Models*

Christopher Pastula, Kathy Tang, Jeffrey Barker, Duane Cronin
University of Waterloo (Waterloo, ON, Canada), Transport Canada Innovation Centre (Canada)

Capability of Small Female Human Surrogate Numerical Models to Assess Submarining Phenomenon in Frontal Impact Sled Test Environment

Anderson De Lima, Will Decker, Chin-Hsu Lin
General Motors (Detroit, MI, USA)

10:20-10:40am Break (Atrium)

**Student Presentation- Eligible for the Student Award presented by Honda*

Program

10:40am-12:00pm Session II

**Preliminary Study of Topology Optimization for Modeling Subject-Specific Vertebral Trabecular Bone*

Austin M. Moore, Samantha M. Efobi, Ashley A. Weaver F. Scott Gayzik
Wake Forest University School of Medicine (Winston-Salem, NC, USA)

**Smooth Particle Hydrodynamics to Improve Post-Fracture Response Prediction of a Finite Element Functional Spinal Unit Model in Compression*

Sophia Ngan, Claire Rampersadh, Duane Cronin
University of Waterloo (Waterloo, ON, Canada)

Head Kinematics of the M50 and F05 Model for Volunteer 45-degree Oblique Impacts

Jeffrey Barker, Duane Cronin
University of Waterloo (Waterloo, ON, Canada)

**Updates on the GHBMF F05 Head Model Version 6.0 - Brain Strain Validation and Brain Injury Risk Function Development*

Ding Lyu, Shirin Phadke, Abhijeet Kumbhare, Liying Zhang
Wayne State University (Detroit, MI, USA)

12:00-1:20pm Lunch Break (Atrium)

**Student Presentation- Eligible for the Student Award presented by Honda*

Program

1:20-2:40pm Session III

Comparison of Far-Side Injury Risks as Predicted by Human Body Models to Estimations from Real-World Crashes in Similar Conditions

Berkan Guleyupoglu, Karan Devane, Fang-Chi Hsu, Bharath Koya, Ashley Weaver, Matthew Davis, F. Scott Gayzik

Elemance (Winston-Salem, NC, USA), Virginia Tech-Wake Forest University Center for Injury Biomechanics (Winston-Salem, NC, USA)

**Biofidelity Assessment of GHBMCM50-O in a Rear-Facing Seating Configuration in a High-Speed Frontal Impact*

Vikram Pradhan, Rakshit Ramachandra, Jason Stammen, Corey Kracht, Kevin Moorhouse, John Bolte, Yun-Seok Kang

The Ohio State University (Columbus, OH, USA), Transportation Research Center, Inc, NHTSA/VRTC, TS-Tech Americas INC

**Computational Assessment of the Effects of Active Musculature on Astronaut Body Kinematics and Injury Risk for Piloted Lunar Landings in a Standing Posture*

Mitesh Lalwala, Karan Devane, Bharath Koya, Scott Gayzik, Joel Stitzel, Ashley Weaver

Wake Forest School of Medicine (Winston-Salem, NC, USA)

Development of Thoracic Injury Risk Functions for Human Body Models

Jason Forman, Shubham Kulkarni, Daniel Perez Rapela, Sayak Mukherjee, Bronislaw Gepner, Matthew Panzer, Jason Hallman

University of Virginia Center for Applied Biomechanics (Charlottesville, VA, USA), Toyota Motor North America R&D

2:40-3:00pm Break (Atrium)

**Student Presentation- Eligible for the Student Award presented by Honda*

Program

3:00-4:00 Session IV: GHBMC Tools Workshop

Human Body Model Positioning using Oasys PRIMER

Galal Mohamed- Ove Arup Systems - Oasys (Manchester, UK)

Biofidelic Positioning and Post-Processing of GHBMC Human Models with ANSA and META

Nikos Tzolas, Athanasios Lioras, Lambros Rorris- BETA CAE Systems SA (Thessaloniki, Greece), BETA CAE Systems International AG

Metriks: The Human Body Model Post-Processor

James Gaewsky- Elemance, LLC (Winston-Salem, NC, USA)

4:00-4:10pm Student Award Presentation (presented by Honda)

4:10-4:15pm Closing Remarks

4:15-6:15pm Reception and Hors d'oeuvres (Atrium)