

Sunday, Oct. 15, 2017

Student Symposium - 9:00 am - 5:45 pm Sponsored by Nissan Motor Company

9:00AM - 9:10AM	Welcome - Vinoly Grand Ballroom 1
9:10AM - 12:00PM	Student Presentations: Novel Biomechanics Data and Its Use in Computational Modeling Session Moderators: Scott Gayzik, PhD & Anthony Stein, PhD
9:10AM - 9:30AM	Three-Dimensional Brain Deformation Under Dynamic Head Rotation and Preliminary Assessment of Brain FE Models Jean S. Giudice Vilar, BME, University of Virginia, Charlottesville, VA
9:30AM - 9:50AM	Estimation of Fiber Angles in Intercostal Muscles from Cadaveric Thoraces Yuliia Sednieva, MS, Arts et Metiers ParisTech, France
9:50AM - 10:10AM	Parametric Cervical Spine Model for Rear-End Impact Simulations Roman Bumberger, MS, BS, Loughborough University, United Kingdom
10:10AM - 10:30AM	Evaluating Rib Fracture Risk Using a Probabilistic Approach in Finite Element Frontal Crash Reconstruction Logan Miller, MS, Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences, Winston-Salem, NC
10:30AM - 11:00AM	Break - Vinoly Grand Ballroom Foyer
11:00AM - 12:00PM	Student Presentations: Populations and Crash Modes of Increased Vulnerability
11:00AM - 11:20AM	Efficacy of Seatbelt Routing Schemes on Newer Booster Child Seats in Simulated Frontal Motor Vehicle Crashes Jalaj Maheshwari, MS, University of Pennsylvania, Philadelphia, PA
11:20AM - 11:40AM	Comparison of WorldSID to PMHS Shoulder-to-Belt Interaction in Far-Side Impact Configurations Daniel Perez-Rapela, MS, University of Virginia, Charlottesville, VA
11:40AM - 12:00PM	Vehicle Safety for Wheelchair Users: The Role of Anthropometry Susana Lopez-Sanchez, MSC, Loughborough University, England
12:00PM - 1:15PM	Lunch - Vinoly Grand Ballroom 2
1:15PM - 3:45PM	Student Presentations: Injury Classification and Epidemilogical Studies Session Moderators: Andrew Kemper, PhD & Ashley Weaver, PhD
1:15PM - 1:35PM	Validation of an ICD-9-CM map to AIS 2005 update 2008 Kimberly Glerum, BS, The Warren Alpert Medical School of Brown University, Providence, RI
1:35PM - 1:55PM	The Spanish ICU Trauma Registry (RETRAUCI) and its Role Defining the Trauma Patterns Jesus Barea-Mendoza, MD, University Hospital: "12 de Octubre", Spain

1:55PM - 2:15PM	The Relationship Between Emergency Medical Service Response Time and Prehospital Death Following Motor Vehicle Crashes: Rural-Urban Disparities and Implications for Trauma System Performance Improvement James Byrne, MD, University of Toronto, Canada
2:15PM - 2:35PM	Break - Vinoly Grand Ballroom Foyer
2:35PM - 3:45PM	Student Presentations: Lower Extremity and Pedestrian Injury Biomechanics
2:35PM - 2:55PM	Injury and Response Characteristics of the 5th Percentile Female Lower Extremity Under Axial Loading Carolyn Roberts, University of Virginia, Charlottesville, VA
2:55PM - 3:15PM	Detailed Finite Element Model of a 50th Percentile Male for Simulating Pedestrian Accidents Wansoo Pak, Virginia Tech, Blacksburg, VA
3:15PM - 3:35 PM	Response of the Knee Joint to Translational and Bending Loads Zhaonan Sun, BSC, University of Virginia, Charlottesville, VA
3:35PM - 3:45PM	Break - Vinoly Grand Ballroom Foyer
3:45PM - 5:45PM	Mentoring Session - Vinoly Grand Ballroom 2
6:30PM	Welcome Reception - Silk Road 1

Monday, Oct. 16, 2017

Main Conference - 7:30 am - 4:30 pm

7:30AM - 8:00AM	Continental Breakfast - Vinoly Grand Ballroom Foyer
8:00AM - 8:10AM	Welcome Address - Vinoly Grand Ballroom
8:10AM - 9:00AM	Keynote Address by Michiel van Ratingen PhD, PDEng, Msc Secretary General, European New Car Assessment Programme - For Safer Cars New Frontiers in Vehicle Safety: From Vehicle Crashworthiness to Automation Session Moderator: Matt Maltese, PhD
Epidemiology Session	on Moderators: Gary Milavetz, PharmD, FCCP, FAPhA, DrPH & Carl Soderstrom, MD
9:00AM -9:20AM	 Effectiveness of Lowering the Blood Alcohol Concentration (BAC) Limit for Driving from .10 to .08 in the United States Author: James Fell MS, National Opinion Research Center (NORC) at the University of Chicago, Chicago, IL Co-Author: Michael Scherer
9:20AM - 9:40AM	 2 Burden of Road Traffic Injuries Related to Delays in Implementing Safety Belt Laws in Low- and Lower-Middle-Income Countries Author: Louis Rachid Salmi MD PhD, Centre INSERM Bordeaux Population Health (Injury Epidemiology, Transportation, Occupation Team), University de Bordeaux, Bordeaux, France Co-Authors: Aurélie Martin; Emmanuel Lagarde
9:40AM - 10:00AM	 The Effectiveness of Child Restraint and Seat-Belt Legislation in Reducing Child Injuries: the Case of Serbia Author: Jose Ignacio Nazif-Muñoz PhD MA, <i>McGill University, Quebec, Canada</i> Co-Author: Nenad Nikolic
10:00AM - 10:20AM	 An Insight of WHO Accident Database by Cluster Analysis with Self Organizing Map (SOM) Author: Chinmoy Pal, Dr Engg, Nissan Motor Company LTD, Kanagaw, Japan Co-Authors: Shigeru Hirayama; Narahari Sangolla, K. Vimalathithan; Jeyabharath Manoharan, Prakash Gopinath
10:20AM - 10:30AM	 Novel Method of Estimating AROC Using an Injury Risk Curve for Biomechanical Injury Metric Selection Author: Alexander Baker MS, Wake Forest Center for Injury Biomechanics, Winston-Salem, NC Co-Authors: F. Scott Gayzik; Fang-Chi Hsu
10:30 AM - 10:50AM	Break - Vinoly Grand Ballroom Foyer
10:50AM - 11:00AM	 Evaluation of a Combination of Community Initiatives to Reduce Driving While Intoxicated and Other Alcohol-Related Harm Author: James Fell MS, National Opinion Research Center at the University of Chicago, Chicago, IL Co-Author: Erin Tanenbaum

11:00AM - 11:10AM	 The Extent of Backover Collisions Internationally Author: Brian Fildes PhD, Monash University Accident Research Centre, Monash University, Melbourne, Australia Co-Author: Michael Keall
11:10AM - 11:20AM	 Using Medico-Legal Data to Investigate Fatal Older Road User Crash Circumstances and Risk Factors Author: Sjaan Koppel BA BAppSc PhD, Monash University Accident Research Centre, Monash University, Melbourne, Australia Co-Authors: Lyndal Bugeja; Daisy Smith; Ashne Lamb; Jeremy Dwyer; Michael Fitzharris; Stuart Newstead; Angelo DâElia; Judith Charlton
11:20AM - 11:30AM	9 Association of Cell Phone Bans with Fatal Crashes Among Young Drivers Author: Sijun Shen PhD, The Research Institute at Nationwide Children's Hospital, Columbus, OH Co-Author: Toni Rudisill
Biomechanics Sessi	on Moderators: Jason Forman, PhD & Amanda Agnew, PhD
11:30AM - 11:50AM	 Numerical Investigation of Driver Lower Extremity Injuries in Finite Element Frontal Crash Reconstruction Author: Xin Ye, Wake Forest University, Winston-Salem, NC Co-Authors: James Gaewsky; Logan Miller; Derek Jones; Mireille Kelley; Jeffrey Suhey; Bharath Koya; Joel D. Stitzel; Ashley Weaver
11:50AM - 12:00PM	 A Preliminary Study of Human Model Head and Neck Response to Frontal Loading in Non-Traditional Occupant Seating Configurations Author: Scott Gayzik PhD, Wake Forest University School of Medicine, Winston-Salem, NC Co-Authors: Bharath Koya; Matthew L. Davis
12:00PM - 1:00PM	Lunch - Silk Road 1
Biomechanics cont.	
1:00PM - 1:20PM	 Influence of Morphological Variations on Cervical Spine Segmental Responses from Inertial Loading Author: Daniel John Jobin, <i>Medical College of Wisconsin, Milwaukee, WI</i> Co-Authors: Mike Arun; Saravanakumar Gurunathan; Narayan Yoganandan
1:20PM - 1:40PM	 Bailed Rib Region Prediction in a Human Body Model During Crash Events with Pre-Crash Braking Author: Berkan Guleyupoglu MS, <i>Wake Forest University School of Medicine, Winston-Salem, NC</i> Co-Authors: Ryan Barnard; Bharath Koya; F. Scott Gayzik
1:40PM - 2:00PM	 Initial Analysis of Archived Non-Human Primate Frontal and Rear Impact Data from the Biodynamics Data Resource Author: Ardyn Olszko MS, U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL Co-Authors: Christine Beltran; Kimberly Vasquez; James McGhee; Valeta Chancey; Narayan Yoganandan, Frank Pintar

2:00PM - 2:20PM	Occupant Kinematics of the Hybrid III, THOR-M, and Post-Mortem Human Surrogates Under Various Restraint Conditions in Full-Scale Frontal Sled Tests Author: Devon Albert, Virginia Tech, Blacksburg, VA Co-Authors: Stephanie Beeman; Andrew Kemper
2:20PM - 2:40PM	 Kinematics and Dynamic Responses of Young and Elderly Occupants in Low-Speed Frontal Tests Author: Francisco Lopez-Valdes PhD, Universidad de Zaragoza, Zaragoza, Spain Co-Authors: Oscar Juste-Lorente; Ana Lorente; Ana Piqueras; Asta Danauskienė; Julia Muehlbauer; Ioannis Symeonidis; Mario Maza-Frechin; Steffen Peldschus; <u>Sylvia Schick</u>
2:40PM - 3:00PM	 Injury Risk Functions Based on Population-Based Finite Element Model Responses: Application to Femurs Under Dynamic Three-Point Bending Author: Gwansik Park PhD Candidate, Mechanical and Aerospace Engineering, Center for Applied Biomechanics, University of Virginia, Charlottesville, VA Co-Authors: Jason Forman; Taewung Kim; Matthew Panzer; Jeff Crandall
3:00PM - 3:10PM	Trunk Muscle Recruitment Patterns in Simulated Pre-Crash Events Author: Jóna Marín Ólafsdóttir MSc, Chalmers University of Technology, Gorthenberg, Sweden Co-Authors: Jason B. Fice; Daniel W. H. Mang; Karin Brolin; Johan Davidsson; Jean-Sebastien Blouin; Gunter P. Siegmund
3:10PM - 3:30PM	Break - Vinoly Grand Ballroom Foyer
Occupant Protection	Session Moderators: Shayn Martin, MD
3:30PM - 3:50PM	Comparison of Three-Point Belt Fit Between Humans and ATDs in Rear Seats Author: Matthew Reed PhD, University of Michigan, Ann Arbor, MI Co-Authors: Jangwoon Park; Sheila Ebert-Hamilton
3:50PM - 4:10PM	 Does Obesity Affect the Position of Seat Belt Loading in Occupants Involved in Real-World Motor Vehicle Collisions? Author: Thomas Hartka MD MS, University of Virginia, Charlottesville, VA Co-Authors: Hannah Carr; Brittany Smith; Monica Melmer; Mark Sochor
4:10PM - 4:30PM	 Active Muscle Response Contributes to Increased Injury Risk of Lower Extremity in Occupant-Knee Airbag Interaction Author: Bingbing Nie PhD, University of Virginia Center for Applied Biomechanics, Charlottesville, VA Co-Authors: Xin Ye; Deepak Sathyanarayan; Jeff Crandall; Matthew Panzer
4:30PM	Adjourn



Tuesday, Oct. 17, 2017 Main Conference - 8:00 am - 3:30 pm

8:00AM - 8:30AM	Continental Breakfast - Vinoly Grand Ballroom Foyer New Members Breakfast - Rafael 1
8:30AM - 9:30AM	Keynote Address by Shawn Marshall, MD, MSc, FRCPC - Vinoly Grand Ballroom Specialist, Physical Medicine and Rehabilitation and full Professor and Division Head of Physical Medicine and Rehabilitation at the University of Ottawa, Canada, and the Ottawa Hospital
	Candrive Prospective Older Driver Study: Progress Towards the Development of an Older Driver Risk Stratification Tool Session Moderator: Jamie Dow, MD, MBA
Behavioral and Natu	ralistic Studies Session Moderator: Jamie Dow, MD, MBA
9:30AM - 9:50AM	2 Using Naturalistic Driving Data to Better Understand the Driving Exposure and Patterns of Older Drivers Author: Lisa Molnar PhD, University of Michigan Transportation Research Institute (UMTRI),
	Ann Arbor, MI Co-Authors: David Eby; Scott Bogard; David LeBlanc; Jennifer S. Zakrajsek
9:50AM - 10:10AM	a Analysis of Near Crashes Among Novice Teen, Young Adult, and Experienced Adult Drivers Using the SHRP2 Naturalistic Driving Study
	Author: Thomas Seacrist MS, <i>The Children's Hospital of Philadelphia, Center for Child Injury</i> <i>Prevention Studies, Philadelphia, PA</i> Co-Authors: James Megariotis; Abhiti Prabahar; Abyaad Kashem; Ayya Elzarka; Leora Haber; Taryn MacKinney; Helen Loeb
10:10AM - 10:30AM	Evaluating Drugged Driving: Effects of Pain and Anxiety Medications Author: Timothy Brown PhD, National Advanced Driving Simulator, Iowa City, IA Co-Authors: Gary Milavetz; Gary Gaffney; Andrew Spurgin
10:30AM - 10:40AM	Driving Style Indicator Using UDRIVE NDS Data Author: Laurette Guyonvarch PhD, LAB Renault - Groupe Peugeot, Nanterre, France
10:30AM - 10:40AM	
	Author: Laurette Guyonvarch PhD, LAB Renault - Groupe Peugeot, Nanterre, France
10:40AM - 11:00AM	Author: Laurette Guyonvarch PhD, <i>LAB Renault - Groupe Peugeot, Nanterre, France</i> Co-Authors: Thierry Hermitte; Clement Val; Frederic Duvivier
10:40AM - 11:00AM	Author: Laurette Guyonvarch PhD, <i>LAB Renault - Groupe Peugeot, Nanterre, France</i> Co-Authors: Thierry Hermitte; Clement Val; Frederic Duvivier Break - <i>Vinoly Grand Ballroom Foyer</i>
10:40AM - 11:00AM Advanced Driver Ass	Author: Laurette Guyonvarch PhD, <i>LAB Renault - Groupe Peugeot, Nanterre, France</i> Co-Authors: Thierry Hermitte; Clement Val; Frederic Duvivier Break - Vinoly Grand Ballroom Foyer sistance Systems Session Moderators: Richard Frampton, PhD & Jason Hallman, PhD An Evaluation of the Real-World Safety Effect of a Lane Change Driver Support
10:40AM - 11:00AM Advanced Driver Ass	Author: Laurette Guyonvarch PhD, <i>LAB Renault - Groupe Peugeot, Nanterre, France</i> Co-Authors: Thierry Hermitte; Clement Val; Frederic Duvivier Break - Vinoly Grand Ballroom Foyer sistance Systems Session Moderators: Richard Frampton, PhD & Jason Hallman, PhD An Evaluation of the Real-World Safety Effect of a Lane Change Driver Support System and Characteristics of Lane-Change Crashes Based on Insurance Claims Data. Author: Irene Isaksson-Hellman Ph Lic, <i>If P&C Insurance, Gothenburg, Sweden</i>
10:40AM - 11:00AM Advanced Driver Ass 11:00AM - 11:20AM	Author: Laurette Guyonvarch PhD, <i>LAB Renault - Groupe Peugeot, Nanterre, France</i> Co-Authors: Thierry Hermitte; Clement Val; Frederic Duvivier Break - Vinoly Grand Ballroom Foyer sistance Systems Session Moderators: Richard Frampton, PhD & Jason Hallman, PhD An Evaluation of the Real-World Safety Effect of a Lane Change Driver Support System and Characteristics of Lane-Change Crashes Based on Insurance Claims Data. Author: Irene Isaksson-Hellman Ph Lic, <i>If P&C Insurance, Gothenburg, Sweden</i> Co-Author: Magdalena Lindman

11:40AM - 12:00PM	Advanced Driver Assistance Systems for Teen Drivers: Teen and Parent Impressions, Perceived Need, and Intervention Preferences
	Author: Eve Weiss MS, <i>The Children's Hospital of Philadelphia, Center for Child Injury</i> <i>Prevention Studies, Philadelphia, PA</i> Co-Authors: Megan Fisher Thiel; Nahida Sultana; <u>Thomas Seacrist</u>
12:00PM - 1:00PM	Lunch - Vinoly Grand Ballroom Foyer
Child Occupant Prote	ection Session Moderators: Matt Maltese, PhD & Rachid Salmi, MD, PhD
1:00PM - 1:20PM	 Frontal and Oblique Crash Tests of HIII6y Child ATD Using Real-World, Observed Child Passenger Postures Author: Katarina Bohman PhD, Autoliv Research, Sweden Co-Authors: Helen Loeb; Judith Charlton; Sjaan Koppel; Suzanne Cross; Kristy Arbogast
1:20PM - 1:40PM	 Kinematics and Shoulder Belt Engagement of Children on Belt-Positioning Boosters During Evasive Steering Maneuvers Author: Gretchen Baker, <i>Chalmers University of Technology, Gothenburg, Sweden</i> Co-Authors: Isabelle Stockman; Katarina Bohman; Lotta Jakobsson; Anna-Lisa Osvalder; Mats Svensson; Maria Wimmerstedt
1:40PM - 2:00PM	 The Influence of Child Restraint Lower Attachment Method on Protection Offered by Forward Facing Child Restraint Systems in Oblique Loading Conditions Author: Hans Hauschild MS, <i>Medical College of Wisconsin, Milwaukee, WI</i> Co-Authors: John Humm; Kristy Arbogast; Matthew Maltese; Frank Pintar; Narayan Yoganandan; Bruce Kaufman
2:00PM - 2:20PM	Top Tether Effectiveness During Side Impacts Author: Yun-Seok Kang PhD, The Ohio State University, Columbus, OH Co-Authors: Jordan Majstorovic; Julie Bing; Eric Dahle; John Bolte
2:20PM - 2:40PM	 B Effectiveness of Booster Child Restraint Systems in Nearside Motor Vehicle Crashes with and without Side Curtain Airbags Author: Aditya Belwadi MS PhD, Center for Injury Research and Prevention, Philadelphia, PA Co-Authors: Todd Hullfish; Jalaj Maheshwari; Benjamin Varone; Alicia Abraczinskas; Richard Hanna
2:40PM - 2:50PM	Trends in Child Passenger Safety Practices in Indiana from 2009-2015 Author: Joseph O'Neil MD MPH, <i>Riley Hospital for Children, Automotive Safety Program, Indianapolis, IN</i> Co-Author: Marilyn J. Bull, MD
2:50PM - 3:30PM	Business Meeting - Vinoly Grand Ballroom
6:30PM	Recognition Dinner - Vinoly Grand Ballroom

Wednesday, Oct. 18, 2017 Main Conference - 7:30 am - 12:00 pm

7:30AM - 8:00AM	Continental Breakfast - Vinoly Grand Ballroom Foyer
8:00AM - 9:00AM	Keynote Address by The Honorable T. Bella Dinh-Zarr, PhD, MPH Board Member, National Transportation Safety Board (NTSB) Before, During, and After the Crash: Advancing Safety at the NTSB Session Moderator: Jim Fell, MS
Pedestrian and Moto	orcycle Crashes Session Moderators: Jim Fell, MS & Hans W. Hauschild, MS
9:00AM - 9:20AM	 Injury Analysis of Patients According to Impact Patterns Involved in Pedestrian Traffic Crashes Author: Hee Young Lee PhD Course, Yonsei University Wonju College of Medicine, Gangwon, Republic of Korea Co-Authors: Jeong II Lee; Chan Young Kang; Joon Seok Kong; Sil Sung; In Hye Kang; Jung Hun Lee; Kang Hyun Lee; Hyun Youk; Young Han Youn; Jong Chan Park
9:20AM - 9:40AM	Oblique Impact Response of Elastomeric Damper Matrix Helmets Author: Tyler Shaw MS, <i>Collision and Injury Dynamics, Los Angeles, CA</i> Co-Authors: Dave Thom; Terry Smith
9:40AM - 10:00AM	 Differences in the Protective Capabilities of Bicycle Helmets in Real-World and Standard-Specified Impact Scenarios Author: Megan Bland BS, Virginia Tech, Blacksburg, VA Co-Authors: David Zuby; Becky Mueller; Steven Rowson
10:00AM - 10:20AM	 Observation of Cyclist Exposure to Car Doors and Latent Impact Speed: A Case Study in Melbourne, Australia Author: Brendan Lawrence PhD Student, Accident Research Centre, Monash University, Melbourne, Australia Co-Authors: David Logan; Jennie Oxley; Mark Stevenson
10:20AM - 10:40AM	Break - Vinoly Grand Ballroom Foyer
Coding, Injuries and	Outcomes Session Moderators: Dustin Petersen, MD, MPH & Carl Schulman, MD
10:40AM - 11:00AM	 The Effects of Collision Type and Crush Extent on the Occupant's Abdominal Injury in Motor Vehicle Accidents Author: ChanYoung Kang Master Course, Yonsei University Wonju College of Medicine, Gangwon, Republic of Korea Co-Authors: Kang Hyun Lee; Oh Hyun Kim; Hyun Youk; Hee Young Lee; Jung Hun Lee; Sil Sung; Joon Seok Kong; Ho Jung Kim; Sang-Chul Kim; Younghan Youn
11:00AM - 11:20AM	AIS Scores in Spine and Spinal Cord Trauma: Epidemiological Considerations Author: Dennis Maiman MD PhD, Medical College of Wisconsin, Milwaukee, WI Co-Authors: Waqar Malik; Narayan Yoganandan; Frank Pintar

11:20AM - 11:30AM	Functional Outcomes of Thoracic Injuries in Pediatric and Adult Occupants Author: Ashley Weaver PhD, <i>Wake Forest University School of Medicine, Wintson-Salem, NC</i> Co-Authors: Samantha Schoell; Jennifer Talton; Ryan Barnard; Joel Stitzel; Mark Zonfrillo
11:30AM - 11:40AM	Quality of Head Injury Coding from Autopsy Reports with AIS © 2005 Update 2008 Author: Sylvia Schick MD MPH, <i>LMU, Institute of Legal Medicine, Munich, Germany</i> Co-Authors: Anton Humrich; Matthew Graw
11:40AM - 11:50AM	 Improvement of Injury Severity Prediction (ISP) of AACN During On-Site Triage Using Vehicle Deformation Pattern for Car to Car (C2C) Side Impacts Author: Chinmoy Pal, Dr. Engg, Nissan Motor Company LTD, Kanagaw, Japan Co-Authors: Shigeru Hirayama, Manoharan Jeyabharath Gopinath Prakash, Vimalathithan Kulothungan, John Combest; Sangolla Narahari
11:50AM - 12:00PM	Closing Remarks
12:00PM	Adjourn

