

38th Annual Meeting and Conference on Tire Science and Technology

Day 1 – Tuesday, September 10, 2019

All Sessions take place in Akron/Summit Ballroom

7:00 AM	Registration (until 5pm)		
8:00 AM	Welcome		Gerald Potts <i>President of the Society</i>
8:10 AM	Keynote Speaker	<i>Will the Tire Society Rise to Meet the Challenges Created by Future Mobility</i>	Robert Asper , Director, Core System Engineering – Bridgestone Americas Inc.
9:10 AM	Opening Remarks		Anudeep Bhoopalam <i>Program Chair</i>
9:15 AM	Session 1: Tire Performance		Gautam Barot , <i>Kumho Tires</i>
9:20 AM	1.1	The Effect of Bending and Shear Deformation of Belt on the Tire Cornering Stiffness Characteristics	Gibin Gil <i>Hankook Tire Co. Ltd.</i>
9:45 AM	1.2	Analysis and Prediction of Tire Cornering Properties for Different Inflation Pressure Based on Deflection Control	Lu Dang <i>Jilin University</i>
10:10 AM	1.3	Generation of Flexible Ring Tire Models Virtually using FEA: Application to FTire and Dynamic Cleat Simulations	Yaswanth Siramdasu <i>Hankook Tire Co. Ltd.</i>
10:35 AM	1.4	Developing a Monster Tire	Ron Tatlock , <i>BKT USA Inc.</i>
11:00 AM	Networking Break		
11:20 AM	Session 2: New Light on Tire Technology		Yusheng Chen , <i>Cooper Tire & Rubber</i>
11:25 AM	2.1	A Novel Approach for the Viscoelastic Treaded Tires Simulation Using Localized Tread Pattern Coupling with Stationary Rolling Tire Structure	Thirumal Alagu Palanichamy <i>Leibniz Universität Hannover</i>
11:50 AM	2.2	Simulation Analysis of Tire Inflation Pressure Loss Coupled with Temperature Field and Oxidation Reaction	Liu Ji <i>Jiangsu University</i>
12:15 PM	Lunch (Provided)		
1:30 PM	Session 3: New Light on Tire Technology		Yaswanth Siramdasu , <i>Hankook Tires</i>
1:35 PM	3.1	Prediction and Validation of an Agricultural Tire-Soil Interaction Using Advanced Modeling Techniques	Zeinab El-Sayegh , <i>University of Ontario Institute of Technology</i>
2:00 PM	3.2	Modeling Vibration Induced Tire-Pavement Interaction Noise in the Mid-Frequency Range	Sterling McBride <i>Virginia Tech</i>
2:25 PM	3.3	Development of a Characterization Method of Tire Handling Dynamics Based on an Optical Measuring System	Chao Liu , <i>TU Dresden</i>
2:50 PM	Networking Break		
3:10 PM	Session 4: Supplier Technology		Jan Terziyski , <i>Nexen Tire</i>
3:15 PM	4.1	Analysis of Self-Heating, Standing Wave Development, and Fatigue During Regulatory High-Speed Testing Protocols	Will Mars <i>Endurica</i>
3:40 PM	4.2	Tire Performance Simulation and Durability Evaluation using ANSYS	Jin Wang , <i>Ansys</i>
4:05 PM	4.3	New Methods for Assessing Tire-Related Vehicle Interior Noise	Peter Schaldenbrand , <i>Siemens</i>
4:30 PM	4.4	Enhanced Fiala Tire Model for Durability Simulation	Chris Coker , <i>Altair</i>
5:00 PM	Reception		
6:00 PM	Awards Banquet	<i>Dinner Speaker: "Time versus Space in Urban Mobility"</i>	Pierre Lefevre , <i>CTO - Coast Autonomous</i>
8:00 PM	Close of Day 1		

Day 2 – Wednesday, September 11, 2019

All Sessions take place in Akron/Summit Ballroom

7:30 AM	Registration (until 5pm)	
8:00 AM	Opening Remarks	Anudeep Bhoopalam <i>Program Chair</i>
8:05 AM	Session 5: Experimental Technologies	Matt Schroeder, <i>Cooper Tire & Rubber</i>
8:10 AM	5.1 A Study of the Effect of Tread Design Changes on Tire Patch Dynamics at High Speeds Through Use of a Dynamic Contact Force Measurement Rig	Matt Van Gennip <i>A&D Technology</i>
8:35 AM	5.2 Tread Block Force and Displacement Measurements during Rolling Contact Testing on a Stationary Machine	Bruce Rusnak <i>TMSI LLC</i>
9:00 AM	State of the Society	Gerald Potts, President of Society
9:20 AM	Panel Discussion - Tire Industry Realignment Necessities for Mobility Market Trends	Ric Mousseau <i>General Motors</i>
10:20 AM	Networking Break	
10:40 AM	Session 6: Emerging Technologies	Corissa Lee <i>Exponent</i>
10:45 AM	6.1 Vision on a Digital Twin of the Road System for Future Mobility	Michael Kaliske <i>TU Dresden</i>
11:10 AM	6.2 Machine Learning Guided Discovery of New Compounds	Brandon Kelly <i>Goodyear Tire & Rubber</i>
11:35 AM	6.3 Advanced Antenna Simulation Tools for Intelligent Smart Tires	CJ Reddy, Altair
12:00 PM	Lunch (Provided)	
1: 15 PM	Plenary Lecture <i>"Autonomous Vehicles: The Good, the Bad and the Ugly"</i>	Srikanth Saripalli, Co-Director, Center for Autonomous Vehicles and Sensor Systems - Texas A&M University.
2:20 PM	Session 7: Simulations	Timothy Davis <i>Goodyear Tire & Rubber</i>
2:25 PM	7.1 Finite Element Modeling and Critical Plane Analysis of a Cut and Chip Experiment for Rubber	Chris Robertson <i>Endurica</i>
2:50 PM	7.2 A Study of the Influence of Waveforms on Fatigue Crack Growth Characteristics of Tyre Tread Rubber using Finite Element Analysis	Prasenjit Ghosh <i>HASTERI</i>
3:15 PM	7.3 Durability Evaluation in Elastomers using Fracture Mechanics	Mario Garcia, TU Dresden
3:40 PM	Networking Break	
4:00 PM	Session 8: Friction	Gobi Gobinath <i>Goodyear Tire & Rubber</i>
4:05 PM	8.1 Using a New 3D-Print-Method to Investigate Rubber Friction Laws on Different Scales	Jan Friederichs <i>RWTH Aachen University</i>
4:30 PM	8.2 Dynamic Behavior of Fractional Viscoelastic Tire Tread Blocks on Pavement	Arne Leenders <i>Leibniz Universität Hannover</i>
5:00 PM	Close of Conference	Anudeep Bhoopalam <i>Program Chair</i>