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** *President of the Society*
8:10 AM	**Keynote Speaker** *Will the Tire Society Rise to Meet the Challenges Created by Future Mobility*		**Robert Asper,** Director, Core System Engineering – Bridgestone Americas Inc.
9:10 AM	Opening Remarks		**Anudeep Bhoopalam** *Program Chair*
9:15 AM	**Session 1: Tire Performance**		**Gautam Barot,** *Kumho Tires*
9:20 AM	1.1	The Effect of Bending and Shear Deformation of Belt on the Tire Cornering Stiffness Characteristics	**Gibin Gil** *Hankook Tire Co. Ltd.*
9:45 AM	1.2	Analysis and Prediction of Tire Cornering Properties for Different Inflation Pressure Based on Deflection Control	**Lu Dang** *Jilin University*
10:10 AM	1.3	Generation of Flexible Ring Tire Models Virtually using FEA: Application to FTire and Dynamic Cleat Simulations	**Yaswanth Siramdasu** *Hankook Tire Co. Ltd.*
10:35 AM	1.4	Developing a Monster Tire	**Ron Tatlock,** *BKT USA Inc.*
11:00 AM	Networking Break		
11:20 AM	**Session 2: New Light on Tire Technology**		**Yusheng Chen,** *Cooper Tire & Rubber*
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** *Leibniz Universität Hannover*
11:50 AM	2.2	Simulation Analysis of Tire Inflation Pressure Loss Coupled with Temperature Field and Oxidation Reaction	**Liu Ji** *Jiangsu University*
12:15 PM	Lunch (Provided)		
1:30 PM	**Session 3: New Light on Tire Technology**		**Yaswanth Siramdasu,** *Hankook Tires*
1:35 PM	3.1	Prediction and Validation of an Agricultural Tire-Soil Interaction Using Advanced Modeling Techniques	**Zeinab El-Sayegh**, *University of Ontario Institute of Technology*
2:00 PM	3.2	Modeling Vibration Induced Tire-Pavement Interaction Noise in the Mid-Frequency Range	**Sterling McBride** *Virginia Tech*
2:25 PM	3.3	Development of a Characterization Method of Tire Handling Dynamics Based on an Optical Measuring System	**Chao Liu,** *TU Dresden*
2:50 PM	Networking Break		
3:10 PM	**Session 4: Supplier Technology**		**Jan Terziyski,** *Nexen Tire*
3:15 PM	4.1	Analysis of Self-Heating, Standing Wave Development, and Fatigue During Regulatory High-Speed Testing Protocols	**Will Mars** *Endurica*
3:40 PM	4.2	Tire Performance Simulation and Durability Evaluation using ANSYS	**Jin Wang,** *Ansys*
4:05 PM	4.3	New Methods for Assessing Tire-Related Vehicle Interior Noise	**Peter Schaldenbrand,** *Siemens*
4:30 PM	4.4	Enhanced Fiala Tire Model for Durability Simulation	**Chris Coker,** *Altair*
5:00 PM	Reception		
6:00 PM	**Awards Banquet** *Dinner Speaker: "Time versus Space in Urban Mobility"*		**Pierre Lefevre,** *CTO - Coast Autonomous*
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** *Program Chair*
8:05 AM	**Session 5: Experimental Technologies**		**Matt Schroeder,** *Cooper Tire & Rubber*
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** *A&D Technology*
8:35 AM	5.2	Tread Block Force and Displacement Measurements during Rolling Contact Testing on a Stationary Machine	**Bruce Rusnak** *TMSI LLC*
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** *General Motors*
10:20 AM	Networking Break		
10:40 AM	**Session 6: Emerging Technologies**		**Corissa Lee** *Exponent*
10:45 AM	6.1	Vision on a Digital Twin of the Road System for Future Mobility	**Michael Kaliske** *TU Dresden*
11:10 AM	6.2	Machine Learning Guided Discovery of New Compounds	**Brandon Kelly** *Goodyear Tire & Rubber*
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** *"Autonomous Vehicles: The Good, the Bad and the Ugly"*		**Srikanth Saripalli,** *Co-Director, Center for Autonomous Vehicles and Sensor Systems - Texas A&M University.*
2:20 PM	**Session 7: Simulations**		**Timothy Davis** *Goodyear Tire & Rubber*
2:25 PM	7.1	Finite Element Modeling and Critical Plane Analysis of a Cut and Chip Experiment for Rubber	**Chris Robertson** *Endurica*
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** *HASTERI*
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** *Goodyear Tire & Rubber*
4:05 PM	8.1	Using a New 3D-Print-Method to Investigate Rubber Friction Laws on Different Scales	**Jan Friederichs** *RWTH Aachen University*
4:30 PM	8.2	Dynamic Behavior of Fractional Viscoelastic Tire Tread Blocks on Pavement	**Arne Leenders** *Leibniz Universität Hannover*
5:00 PM	Close of Conference		**Anudeep Bhoopalam** *Program Chair*