

## 26<sup>th</sup> Annual Meeting and Conference on Tire Science and Technology

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### Day 1 – Tuesday, September 25

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7:15 AM	<b>Registration</b>		
8:15 AM	<b>Conference Opening</b>		Hans Dorfi President of The Tire Society
8:30 AM	<b>Keynote Address</b>		Mr. Tadanobu Nagumo President of the Yokohama Rubber co., Ltd.
9:15 AM	<b>Technical Program Opening</b>		Mahmoud Assaad, Program Chair
9:20 AM	<b>Session 1: Tire Durability</b>		Kevin Ellwood / Donald Amos, Session Chair
9:20 AM	1.1	Overview of Roadwheel Test Development for an Aged Tire Durability Standard	Greg Altman, James Popio, David Stalnaker
9:45 AM	1.2	Study on Oxygen and Nitrogen Permeation Through Tires	Donald D. Amos
10:10 AM	1.3	Evaluation of New and Aged Tires by Accelerated Service Life Tests: Comparison Using a Stepped-Up-Load and a Stepped-Up-Speed Road wheel Test	Larry R. Evans, James D. MacIlsac Jr. Sebastian Feve
10:35 AM	1.4	Yokohama Advanced Liner Technology	Tomohiko Kogure, Kinya Kawakami, Hirohisa Hazama, Yasuo Hatano, Yoshiaki Hashimura
11:00 AM	<b>Break</b>		
11:10 AM	<b>Plenary Lecture:</b> A Look at Trends in Tire Design Simulation		Dr. Bruce Engelmann - ABAQUS
12:00 AM	<b>Lunch</b>		
1:00 PM	<b>Session 2: Tire Temperature</b>		Mohammed Sobhanie, Session Chair
1:00 PM	2.1	Flat vs. Curved Contact Surfaces Effect on Consumer, P-Metric-LT Tire Operating Temperatures	Leighton Spadone, Jason Bokar
1:25 PM	2.2	Temperature Correction for Rolling Resistance Testing	Jason Bokar
1:50 PM	2.3	ASTM Radial Medium Truck Tire Operating Temperatures – Flat vs. Curved Surfaces	Terrence M. Ruip
2:15 PM	2.4	Thin Film Heat Flux Sensor for Measuring Film Coefficient of Rubber Components of a Rolling Tire	M. C. Assaad, G. C. Fralick, J. D. Wrbanek, J. M. Gonzalez
2:40 PM	<b>Break</b>		
3:00 PM	<b>Session 3: Student Papers</b>		Ric Mousseau, Session Chair
3:00 PM	3.1	Prediction of Tire Profile Wear by Steady State FEM	Kory R. Smith, Ronald H. Kennedy, Samuel B. Knisley
3:25 PM	3.2	Prediction of Tread Block Forces for Free-Rolling Tyres	Feiyang Liu, Michael P. F. Sutcliffe, Will R. Graham
3:50 PM	3.3	Study of Materials Properties of Tread Rubbers; Experiments and FEA Verification	Hiroshi Yokohama, Stephen D. Hall, Robert B. Randall
4:15 PM	<b>Break</b>		

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4:35 PM	<b>Session 4: Tire/Vehicle Dynamics</b>		Zhen-Zhong Du, Session Chair
4:35 PM	4.1	Tire-Suspension-Chassis Dynamics in Rolling over Obstacles for Ride and Harshness Analysis	Vladimir Kerchman
5:00 PM	4.2	Vehicle Suspension Measurements: Evaluation of the Benefits of Dynamic over Quasistatic Kinematics and Compliance Testing	Terence E. Wei, Hans R. Dorfi
5:25 PM	4.3	Effect of Tire Stiffness on the Articulated Vehicles Under steer Gradient	Mohamed Kamel Salaani
5:50 PM	<b>End of Technical Session</b>		
7:00 PM	<b>Dinner:</b> History and How to Flying the Goodyear Blimp		Jim Maloney Goodyear Airship Operations

## Day 2 – Wednesday, September 26

8:15 AM	<b>Opening/Announcements</b>	
8:20 AM	<b>Session 5: Tire NVH</b>	Lin Kung, Session Chair
8:20 AM	5.1 Finite Element Modeling of Rolling Tire Dynamics for Noise Prediction	Maik Brinkmeier, Udo Nackenhorst
8:45 AM	5.2 Engineering Solution of Rolling Tire Vibration Model	Dong Zheng
9:10 AM	5.3 Validation of a Belt Model for Prediction of Hub Forces from a Rolling Tire	Christophe Lecomte, Will R. Graham, Dan J. O'Boy
9:35 AM	<b>Break</b>	
9:55 AM	<b>Session 6: Tire Wear/Friction</b>	Barry Yavari, Session Chair
9:55 AM	6.1 Experimental Validation of the Brush Tire Model	Jacob Svendenius, Fredrik Bruzelius, Magnus Gafvert, Johan Hulten
10:20 AM	6.2 New Design Concept of Friction Rig; Fundamentals to Predict Tire Forces	Hiroshi Yokohama, Stephen D. Hall, Robert B. Randall
10:45 AM	6.3 A Study on the Frictional Energy of the Rubber Block According to the Effectiveness Factors	Hyun-Seung Yoo, Doo-Man Kim, Sang-Ju Lee, Bum-Jin Ko
11:10 AM	<b>State of the Society</b>	
11:30 AM	<b>Lunch</b>	
12:30 PM	<b>Session 7: Materials</b>	Cigdem Gurer, Session Chair
12:30 PM	7.1 Novel Coupling Agents for silica-filled rubber with superior processing safety and improved hysteresis of the vulcanizates	M. Gerster, E. Peregi, C. Fagouri
12:55 PM	7.2 Damping Characterization using Hysteresis on Static Non-rolling and Dynamic Rolling Behavior of Farm Tires	Guiyong Song, Brett Conard, S.K.R. Iyengar
1:20 PM	7.3 Non-Pneumatic Bicycle Tire: Design Concepts and Virtual Product Development	Kundan Kumar, Gerhard Scharr
1:45 PM	7.4 Rubber Hyperelastic Behaviours Study With Application to TBR FEA	K.J. Gong, J.X. Ye, Y.T. Wei, Y. W. Luo, Y. Liu, Y. M. Miao, D. L. Chai
2:10 PM	<b>Break</b>	
2:30 PM	<b>Session 8: Tire Structural Performance</b>	Abraham Pannikottu / Bill Rockwell, Session Chair
2:30 PM	8.1 Analytical Solution for the Stresses Arising in +/- Angle Ply Belts of Radial Tires	Robert McGinty, Timothy B. Rhyne, Steven M. Cron
2:55 PM	8.2 Effect of Normal Pressure Distributions on the Analytical Solutions to Tire Forces	Mohamed Kamel Salaani
3:20 PM	8.3 Simulation and Measurement of Steel Cords Forces in Typical Truck Radial Tire	Y. Liu, Y. Luo, Y. Miao, D. Chai, Y. Wei, K. Gong, Y. Ye
3:45 PM	8.4 A Case in Evaluating a Finite Element Tire Model: Measurements on Real Tire Configuration and Improved Computational Contact Pressure	Li Bing, Xia Yuanming, Li Wei
4:10 PM	<b>End of Conference</b>	