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2027

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GUMFERENCE 2027 | JANUARY 28, 2027

SCIENTIFIC PROGRAMME

ALL TIMES IN CET (CENTRAL EUROPEAN TIME)

8:00 OPENING WORDS

8:15 **Kenji Urayama** (Kyoto University, Japan)
Multiaxial Fracture and Local Damage Evolution in Elastomers: Combined DIC and Biaxial Stretching

8:50 **Xin Tan** (Cabot Corporation, China)
Formulation and Processing Effects on Fatigue Crack Growth Behavior in Rubber

9:25 **Anandarup Bhattacharyya** (HASETRI, India)
Prediction of Groove Fatigue Life Using Finite Element Methods

BREAK | 9:55 – 10:15

10:15 **Subhan Salaeh** (Prince of Songkla University, Thailand)
Natural Rubber as a Smart Elastic Platform for Multi-Stimuli Responsive Materials

10:50 **Xiaohe Xu** (Karlsruhe Institute of Technology, Germany)
Analysis of Rubber Mechanical Fatigue Behavior Under Torsion via Fourier Transform of Stress Using a Modified Rubber Process Analyzer

11:25 **Chaoying Wan** (University of Warwick, UK)
Scalable Upcycling of End-of-Life Tyre into Functional Carbon Black and Liquid Rubber

12:00 **Nikolas Ryzí** (Tomas Bata University in Zlin, Czechia)
The Influence of Temperature on Fatigue Crack Growth Properties of Rubber from Crack Initiation to Critical Failure

BREAK | 12:30 – 13:15

13:15 **Julian Meyer** (TU Dresden, Germany)
Modeling Uncured Tread Rubber by the Material Point Method

13:50 **Ilkka Lehtoranta** (Black Donuts, Finland)
Advanced Tire Tread Bio-Based Reinforcement through Nemus Technology

14:25 **Barthélémy Gros** (IPF Dresden, Germany)
Spatiotemporal Tracking of Strain-Induced Crystallization in Natural Rubber

BREAK | 14:55 – 15:15

15:15 **Dominika Kitsonová** (DATWYLER, Switzerland)
Battery Cell Seal Material – Development and Advanced Testing

15:50 **Fernando Martin-Salamanca** (ICTP-CSIC Madrid, Spain)
Monte Carlo Insights into the Molecular Mechanisms Governing Failure in Polymer Networks

16:25 **Rich Baldauf** (Eastern Research Group Inc., USA & Gdansk University of Technology, Poland)
Bridging Laboratory and Real-World Evaluation of Tire Wear: Integrated Dynamometer, Test Track, and Pavement Testing Methods

17:00 CLOSING WORDS