Tuesday, January 23, 2024 – Conference Program

	P1 - Plenary Session, room 1				
10:00	**Welcome and opening of the conference** *CEO Michael Walz, TAE, GER, Dr. Nicole Dörr, AC2T research GmbH, AUT, Prof. Carsten Gachot, TU Wien, AUT ,*				
10:30	**Minimizing CO2-Emissions and Maximize ROI: Implementing known Tribology Principles and Design for Zero for a Carbon Neutral Industry** *Prof. Dr. Victoria Van Camp, Prof. Roland Larsson, Luleå University of Technology, , SWE*				
11:00	**Sustainability in Winter Sports - the Tribological Perspective** *Prof. Dr. Matthias Scherge, Fraunhofer IWM, GER*				
11:30	*Coffee Break / Exhibition*				
	A1 - New Trends in Lubricants and Additives *Dr. Rich Baker* **room 1**	**A2 - Machine Elements and their Application in Tribology** *Dr.-Ing. Michael Gless* **room 2**	**A3 - Computational Methods and Digital Transformation in Tribology** *Prof. Georg Jacobs* **room 3**	**A4 - Coatings, Surface Interactions and Underlying Mechanisms** *Dr. Max Marian* **room 4**	**A5 - Test and Measurement Methodologies** *Dr. Markus Grebe* **room 5**
12:00	**Next-Generation Anti-Wear for EV-Lubricants** *Christelle Chretien, Syensqo, USA*	**Simulation-Based Evaluation of Drive Cycle Fuel Efficiency Gains in Gasoline Engines through Engine Oil Viscosity Reduction** *Xavier Simón-Montero, Universidade de Vigo, ESP*	**Simulation of the Local CoF Development in Dynamically Loaded Contact Surfaces (Fretting)** *Silvano Oehme, University of Technology Chemnitz, GER*	**Combination of DLC Coatings and Dedicated Lubricants in Order to Achieve Supralow Friction in Highly Loaded Sliding Contacts** *PhD Johnny Dufils, IREIS/HEF group, FRA*	**Comparison of Different Standard Test Methods for Evaluating Greases for Rolling Bearings under Vibration Load or at Small Oscillation Angles** *Dr. Markus Grebe, Competence Center for Tribology, Hochschule Mannheim, GER*
12:30	**Lubricants Technology for Improving the Protection Performance of Reduction Gears in Transaxles for Electric Vehicles** *Daisuke Takekawa, Idemitsu Kosan Co. Ltd, JPN*	**A Study on the Effect of Surface Tension on the Drag Torque of Wet Clutches** *Dr. Nikolaos Rogkas, National Technical University of Athens, GRC*	**Static and Dynamic Friction of Elastomers in Dry Conditions: Simulating Commercial Materials and Products** *Dr. Fabian Kaiser, Freudenberg Technology Innovation SE & Co. KG, GER*	**Numerical and Experimental Analysis of the Tribological Performance of a DLC-Coated Piston Ring-Cylinder Liner Contact** *PhD Johnny Dufils, IREIS/HEF group, FRA*	**Panta Rhei: Everything Flows (But Not Everything Flows the Same)** *René Westbroek, Axel Christiernsson International, SWE*
13:00	**Impact of Lubricating Oils on the Cooling Performance for Liquid-Cooled Motor and Battery Thermal Control System Applied to Electric Transaxles** *Dr. Keiichi Narita, Idemitsu Kosan Co. Ltd., JPN*	**Implementing the Use of Water Based Environmentally Acceptable Lubricants in the Ship Industry – on the Frictional and Wear Performance of SiC-YAG Composite Coating** *Nuria Espallargas, NTNU Norwegian University of Science and Technology, NOR*	**Identification of the Dominant Wear Mechanism in Dry Contacts by Numerical Modeling** *Florian Köhn, Aalen University, GER*	**The Running-In of a DLC-Metal-Tribosystem – a Study on Multiple Scales** *Prof. Dr. Matthias Scherge, Fraunhofer IWM, GER*	**Enhancing Understanding of Grease-Retention and Lubrication-Mechanisms of Oscillating Sliding Contacts with Long Stroke Lengths** *Andreas Keller, HS Mannheim, GER*
13:30	*Lunch Break / Exhibition*				
	B1 - New Trends in Lubricants and Additives *Dr. Manfred Jungk* **room 1**	**B2 - Machine Elements and their Application in Tribology** *Rüdiger Krethe* **room 2**	**B3 - Computational Methods and Digital Transformation in Tribology** *Dr. Johannes Müller* **room 3**	**B4 - Coatings, Surface Interactions and Underlying Mechanisms** *Dr. Max Marian* **room 4**	**B5 - Test and Measurement Methodologies** *Prof. Andreas Pauschitz* **room 5**
14:30	**Novel Organic Friction Modifiers with Extended Performance Durability** *Dr. Pieter Struelens, Oleon NV, BEL*	**Stick-Slip in Hydraulic Cylinders: New Test Methods Simulation as a Tool for Selecting Coating Solutions for Piston Rods to Avoid Critical Operating Conditions** *Giuseppe Tidona, Hochschule Mannheim, GER*	**EHL Simulation for the Design Workflow of Contacts with Limited Lubricant Availability** *Dr. Cesar Pastor, Robert Bosch GmbH / Corporate Research, GER*	**Influence of Particles on DLC Coated Journal Bearings** *Dr. Andreas Nevosad, AC2T research GmbH, AUT*	**Correlation of MTM Stribeck Curves with Efficiency Data for Predictive Analysis of Coaxial EV Gearbox Performance** *Dr. Dimitry Shakhvorostov, Evonik Operations GmbH, GER, Miriam Bäse, Magna Powertrain GmbH & Co KG, AUT ,*
15:00	**Effect of Organic Friction Modifiers on Friction and Wear of HDDEO Formulations** *Dr. Gareth Moody, Cargill, USA*	**Wear Optimization of Roller Chain Drives with Triboactive Transfer Coatings** *Martin Rank, RPTU Kaiserslautern-Landau, GER*	**A Novel Mortar Multiphysics Computational Method for Thermal Elastohydrodynamic Lubrication** *Dr. Volker Gravemeier, AdCo Engineering GW GmbH, GER*	**Assessment of Different Coatings on the Friction and Wear Behavior of Differential Shafts for Electric Vehicles** *Etienne Macron, IREIS/HEF group, FRA*	**LIF Signal Calibration for Bench Simulating Experiments and Engine Oil Film Thickness Investigations** *Dr. Polychronis Dellis, National Technical University of Athens, GRC*
15:30	**Performance Enhancement of Molybdenum-Based Friction Modifiers** *PhD David Boudreau Sr, Vanderbilt Chemicals LLC, USA*	**Investigation of Polymer Solid Lubricated Steel-Bronze Contacts for Worm Gears Apllications** *Dr. Konstantinos Pagkalis, RPTU Kaiserslautern-Landau, GER*	**The European Tribology Centre: Tribology as a Service towards a Sustainable World** *Dr. Xavier Borras, i-TRIBOMAT GmbH, AUT*	**Atomistic Insights into the Behavior of Solid Lubricants under Tribological Load** *Dr. Andreas Klemenz, Fraunhofer IWM, GER*	**Digital Twin Parametrization of a Roller Bearing Based on Ultrasonic Film Thickness Measurement** *Dr. Markus Varga, AC2T research GmbH, AUT*
16:00	*Coffee Break / Exhibition*				
	C1 - New Trends in Lubricants and Additives *Dr. Manfred Jungk* **room 1**	**C2 - Machine Elements and their Application in Tribology** *Dr. Arshia Fatemi* **room 2**	**C3 - Computational Methods and Digital Transformation in Tribology** *Dr. Max Marian* **room 3**	**C4 - Coatings, Surface Interactions and Underlying Mechanisms** *Dr. Markus Varga* **room 4**	**C5 - Test and Measurement Methodologies** *Dr.-Ing. Michael Gless* **room 5**
16:30	**Lubricity-improving Additives Based on the Synergy of Nanoparticles and Protic Ionic Liquid** *Dr. Raimondas Kreivaitis, Vytautas Magnus University Agricultural Academy, LTU*	**Power Loss in High-Speed Angular Contact Ball Bearings** *Jorge Seabra, Universidade do Porto, Faculdade de Engenharia, PRT*	**Development of a Digital Twin through Simulation of PVD/PACVD Coatings for Both Dry and Lubricated Conditions** *Vincent Hoffmann, Tribo Technologies GmbH, GER, Dr. Emanuel Tack, Oerlikon Surface Solutions AG, LIE ,*	**Modification of Surface Properties on Various Mg-Based Alloys for Tribological Applications via Plasma Electrolytic Oxidation Process** *Ashutosh Tiwari, ELB - Eloxalwerk Ludwigsburg Helmut Zerrer GmbH, GER*	**Oil Aging on a Test Rig to Introduce Sustainable Lubricants in Electric Vehicle Transmissions** *Timo König, Hochschule Aalen - Technik und Wirtschaft, GER*
17:00	**Looking for the Perfect Friction Match in the 2D World** *Prof. Dr. Carsten Gachot, TU Wien, AUT*	**Effect of Slip on Piezo-Viscous-Polar Lubricated Multirecessed Hybrid Journal Bearing** *Vishal Singh, Indian Institute of Technology, Jammu, IND*	**Lubrication Mechanism Analysis of Textures in Journal Bearings Using CFD Simulations** *Yujun Wang, Institute for Machine Elements and Systems Engineering, RWTH Aachen University, GER*	**Mechanically Adhesive Micro-Patterned Surfaces: Translating Friction and Mechanical Interlocking in Adhesional Forces** *PhD Marco Bruno, Italian Institute of Technology, ITA*	**Copper Wire Resistance Corrosion Test for Assessing Potential Fluids as E-Thermal Fluids in BEVs Immersion Cooling Applications** *Prof. Dr. Bernardo Tormos, Universitat Politècnica de València, ESP*
17:30	**In-operando Formation of Transition Metal Dichalcogenides – Instant Lubrication by Simple Sprinkling of Se Nano-powder onto Sliding Metal Surfaces** *Philipp Grützmacher, TU Wien, AUT*	**Micropitting in Rolling-Sliding Contacts: Mechanisms and Prevention** *Amir Kadiric, Imperial College London, GB*	**Investigation of Wear Protection and Friction Losses in Ultralow Viscosity Lubricant Formulations: A Combined FEM-CFD Simulation Approach** *Javier Blanco-Rodríguez, Universidade de Vigo, ESP*	**Unveiling Extreme Lightweight Potential by PEO Refinement of Innovative Al Alloys** *Anutsek Sharma, ELB – Eloxalwerk Ludwigsburg Helmut Zerrer GmbH, GER*	**Shear Stability and Thermal Performance Analysis of Engine Oils for Electric Vehicles** *Dr. Deepak Halenahally Veeregowda, Ducom Instruments (Europe) BV, NLD*
18:00	*Evening Reception - TAE main foyer*				