

Frankonia Saal

10:00 Opening | Prof. Gerhard Poll & Prof. Bernd Sauer

10:30 Let's build the future. smarter. cleaner. safer. | Dr. Michael Pausch

11:00 Leading the Change: Innovating for Efficiency with Next-Generation Bearings, AI, Smart Materials, and Embedded Sensing. | Freddy Hernández

11:30 MOVING YOUR WORLD by next generation bearing greases | Dennis Labisch

12:00 **Lunch Break**

Smart Bearings

13:00 Strain measurement on rolling bearings using sensors applied by aerosol-based deposition | Dr. Marcel Bartz

13:30 Experimental investigation of a plain bearing integrated energy harvesting system for the operation of an autarkic, temperature-based condition monitoring system | Thao Baszenski

14:00 PVD Sputtered Thin-Film Sensors Integration in Rolling Bearings for Condition Monitoring | Dennis Konopka

14:30 Smart sensors for wind turbine sliding bearings | Dr. Gary Nicholas

15:00 **Coffee Break**

Materials Engineering and Manufacturing Processes

15:30 Evaluation of welded Bearings by Tailored Forming | Felix Saure

16:00 Effect of manufacturing processes on structural fatigue strength and life prediction method of automobile wheel bearing | Vo-Huu-Thuc Nguyen

16:30 Laser cladding as an efficient production technology to realize bi-metal parts for plain bearings | Dr. Hannes Freisse

17:00 The influence of Bearing Steel Microstructure on Mircopitting Resistance: Theory and Experiments | Dr. Predrag Andric

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12:30 **Lunch Break**

Electric effects

13:00 Influences of electrical stress and parasitic currents on rolling bearings within electrified environments | Marius Krewer

13:30 Conductive grease evaluation on electric erosion in EV market | Dr. Yuxin Zhou

14:00 Improved capacitance calculation of thrust bearings by combining EHL - and electric fieldsimulation | Stefan Paulus

14:30 Recent Advances in Impedance Modelling of Rolling Element Bearings | Steffen Puchtler

15:00 **Coffee Break**

Model-based systems engineering and efficiency

15:30 Innovative Insulation and Grounding Solutions against electrical Erosion | Dr. Jens Dörner

16:00 Efficient Simulation Chains using Artificial Intelligence | Dr. Hannes Grillenberger

16:30 The influence of grease composition and properties on mechanical losses of deep groove ball bearings applied to electric motors | Carolina Croceta Bombazar

17:00 Influence of lubrication on power losses in deep groove ball bearings with limited applied load | Dr. Charlotte Fossier

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Rolling Contact Fatigue

- 08:30 Influence of Edge Zone Characteristics on the Fatigue Life Behavior of Rolling Bearings | Simon Dechant
- 09:00 Investigation White Etching Cracks material robustness for industrial bearings | Ashish Soni
- 09:30 Method development for the consideration of surface morphology in rolling bearing fatigue life calculation | Lukas R uth

10:00 Coffee Break

Bearing Damage

- 10:30 Condition monitoring approach for journal bearings using surface acoustic wave technology | Thomas Decker
- 11:00 Tool chain for wear prediction of journal bearings in planetary gears in wind turbines | Benjamin Lehmann & Mattheus Lucassen
- 11:30 Surface-initiated Rolling Contact Fatigue on a dent: microstructural evolution and effects on the failure mechanism | Aurore Goigoux
- 12:00 Evaluation on the Influence of Raceway Indentation on Bearing Performance | Dr. Rose Yan

12:30 Lunch Break

Rolling Bearing Creep and Test Rig Development

- 13:30 Bearing creep by runout | Jean-Ren  Koch
- 14:00 Influence of Housing Connection Design on Rolling Bearing Creep | Loc le Duc
- 14:30 Enhancing Gearbox Performance by Advanced Bearing Migration Evaluation | Ermalt Lamaj
- 15:00 Development of a hydrodynamic bearing test bench for combined radial and axial loads | Lars Friedrich

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Wind Turbine Bearings

- 08:30 Modelling the loading and lubrication conditions of a tilting pad journal bearings as the main bearing in a wind turbine for use in material testing | Emily Priest
- 09:00 Simulation of hydrodynamic plain bearings for wind turbine gearboxes in Bearinx - analysis of influencing factors | Dr. Michael Plogmann & Matthias Schubert
- 09:30 Pitch bearings for mult-MW wind turbine applications - advanced multi-bearing calculation process and product developments trend regarding pitch bearing and hub modularization | Daniel Becker

10:00 Coffee Break

Lubrication

- 10:30 Fluid models for grease-lubricated rolling contacts: Formation of thickener-rich layer, oil bleeding and starvation | Shuo Zhang
- 11:00 Simultaneous measurement of pressure and temperature in rolling contacts with mixed friction and comparison with calculation results | Stephan Emmrich
- 11:30 Lubrication in oscillating grease-lubricated rolling bearings for different contact lengths | Gernot Bayer
- 12:00 Flows in oil-bath lubricated tapered roller bearings: CFD simulations and PIV measurements | Prof. Dr. Franco Concli

12:30 Lunch Break

Efficiency

- 13:30 Comparison of power losses generated by a deep groove ball bearing and an angular contact one, for oil-jet lubrication and limited applied load | Lionel Darul
- 14:00 Low-Friction Surface Engineering for Railway Wheel-End Bearings | Dr. Victor Brizmer
- 14:30 Quasi-Static Modeling of Roller Element Bearing Internal Loads and Friction Torque at High Speed | Volker Schneider
- 15:00 BearinX makes railway bearings even more efficient | Alexander K be