Substantes Waukesha Vestas CWD 2025 DSEC 2025

Conference Program March 11, 2025

DAY 1

| DSEC I Room: K 4 5 | | | DSEC II Room: K 7 8 9 | | | | CWD I Room: Europasaal | | |
|---|--|-------|---|--|-------|-----------------------------------|--|-------|--|
| | Opening Plenary | 08:30 | | Opening Plenary | 08:30 | | Opening Plenary | 08:30 | |
| | Coffee Break | 11:20 | | Coffee Break | 11:20 | _ | Coffee Break | 11:20 | |
| Drivetrain Technology: Performance & Efficiency Ralf Dinter | Optimization of power-split hybrid drives and of their operating strategy using dynamic programming Hendrik Hoffmann Engiro GmbH | 11:45 | | Automated Generation of Drivetrain Components with Model-based Systems Engineering, Variant Modeling and FVA Workbench Ingo Schulz SKF GmbH | 11:45 | | Next Generation Plain Bearing Technology for Wind Turbine Gearboxes Hermann van Lier ZF Wind Power Antwerpen NV | 11:45 | |
| | Cost Reduction of Four-Point Bending Tests by using an innovative electrohydraulic Drive Concept Timo Jungblut IABG GmbH | 12:10 | Model-Based opment er | Enabling broader access to MBSE system models using collaborative engineering platforms and SysMLv2 Matthias May MSE of RWTH Aachen University | 12:10 | n Bearing l | Simulation and application of hydrodynamic planet bearings for wind turbine Michael Plogmann & Mario Kittsteiner Schaeffler AG & Co. KG | 12:10 | |
| | Design of profile corrections and tolerances in cylindrical gears for noise-sensitive applications in line with production efforts Laurenz Roth WZL of RWTH Aachen University | 12:35 | SE: Seamless Product Devel Jens Demtröd | ASPICE Compliant Model-based Systems Engineering with 3DEXPERIENCE Platform Olivier Sappin Dassault Systemes Catia | 12:35 | Planetary Plai Martin Knops | Analysing and Predicting the Behaviour of Journal Bearings on the Gearbox Operational Behaviour Daniel Piel & Tim Marske Vestas Nacelles Deutschland GmbH | 12:35 | |
| | Lunch Break | 13:00 | | Lunch Break | 13:00 | | Lunch Break | 13:00 | |
| Drivetrain Technology: Noise, Vibration, Harshness Marco Ramm | An efficient simulation chain for predicting the vibro-acoustic behavior of industrial gear units Prateek Chavan SEW-EURODRIVE GmbH & Co KG | 14:00 | | Realizing Multidisciplinary Verification: Synchronizing System Architecture and Electrical Simulation Domains Morten Huber Dassault Systemes | 14:00 | | Measurement of operational characteristics inside a planetary plain bearing under wind turbine operating conditions Dennis Witter ZF Wind Power Antwerpen NV | 14:00 | |
| | Topology Optimization of Nonlinear Elastomer Engine Mounts Considering the Transfer Behavior Sebastian Bahr MSE of RWTH Aachen University | 14:25 | | Lightweight User Interface for Model-Based Systems Engineering of Product Architecture Asanka Maithripala Vestas Wind Systems A/S | 14:25 | | Failure mechanisms of bronze-based plain bearings implemented in gearbox under presence of foreign particles Akash Deo Rheinmetall, Division Power Systems, BU Bearings | 14:25 | |
| | Validation of Models for Calculating the NVH Behavior of Gearbox Systems in an Elastic Multibody Simulation Stefan Wischmann & Alexander Mann MSE & WZL of RWTH Aachen University | 14:50 | Systems Engineering: MBSE in Practical Application Joerro Berroth | Demonstrator Model for an Entity-Based System Modeling Approach Björn Juretzki IME Aachen GmbH (| 14:50 | r Bearing II pass | Detection of particle contamination and lubrication outage in journal bearings in wind turbine gearboxes using surface acoutic wave measurements and machine learning techniques Thomas Decker, CWD of RWTH Aachen University | 14:50 | |
| | Efficient Simulation of Rotordynamics and Acoustics of an Electric Drive Train with Electromagnetic Coupling Alexander Boucke IST GmbH | 15:15 | | Cube - A SaaS collaboration platform for the development of technical systems Heiko Baum Fluidon GmbH | 15:15 | Planetary Plair Arno Klein-Hit | Effect of adding hard particles to welded sliding material in plain bearings for planetary gears Ryo Asaba Daido Metal Co., Ltd. | 15:15 | |
| | Coffee Break | 15:40 | | Coffee Break | 15:40 | | Coffee Break | 15:40 | |
| Machine Elements: Design & Tribology Lutz Lindemann | Influence of Lubricant Particle Contamination on Premature Failure of Electrical Loaded Radial Cylindrical Roller Bearings in Wind Turbines Peter Rößler & Jörn Harling MSE of RWTH Aachen University | 16:10 | Systems Engineering: System Models and Model Libraries Mike Nicolai | Practical approach of system engineering to meet the challenges of agricultural machinery Marco Ramm CLAAS Industrietechnik GmbH | 16:10 | | Miba's Segmented Journal Bearing (SJB™) - an innovative solution for wind turbine main bearings Johannes Hölzl & Patrick Laubichler Miba Gleitlager Austria GmbH | 16:10 | |
| | Machine learning-based prediction of friction losses in textured journal bearings Yujun Wang MSE of RWTH Aachen University | 16:35 | | Seamless Model-Based Concept Exploration, Simulation, Design Optimization and Evaluation of Hydrogen-Electric Drivetrains using a Model Library Lukas Irnich, MSE of RWTH Aachen University | 16:35 | : Plain Bearing on | Fluid-Film-Main-Bearings: An Alternative to Roller Bearings Stefan Haverkamp Waukesha Bearrings | 16:35 | |
| | Geometric Design of Axial Piston Machine Slipper-Bearings made of High-Performance Plastics Felix Schlegel IFAS of RWTH Aachen University | 17:00 | | Reusable Solution Element Libraries for Accelerated Application of MBSE in Mechanical Product Development Frederik Moers MSE of RWTH Aachen University | 17:00 | Main Bearing I Joachim Nitzp | Investigation into the design of a novel conical plain bearing concept with enhanced serviceability Jan Euler CWD of RWTH Aachen University | 17:00 | |
| | Shuttle Transfer from Eurogress to Conferenence Dinner | 18:00 | | Shuttle Transfer from Eurogress to Conferenence Dinner | 18:00 | | Shuttle Transfer from Eurogress to Conferenence Dinner | 18:00 | |
| | Conference Dinner TIVOLI Aachen | 18:30 | | Conference Dinner TIVOLI Aachen | 18:30 | | Conference Dinner TIVOLI Aachen | 18:30 | |

Conference Proceedings at www.cwd-dsec.de/info



CWD peer-reviewed paper at (link.springer.com/collections/eehgdcbhda



DSEC peer-reviewed paper at link.springer.com/collections/ebaaidfffi



| CWD II Room: K 1 | | | CWD III Room: K 2 | | CWD Academic Track Room: K 3 | | |
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| | Opening Plenary | 08:30 | | Opening Plenary | 08:30 | Opening Plenary 08:30 | |
| | Coffee Break | 11:20 | | Coffee Break | 11:20 | Coffee Break | |
| | Probabilistic modelling of the tooth root strength of wind gears Jonas Finken Flender GmbH | 11:45 | Current | Comparative, Experimental Analysis of Parasitic Currents in DFIG and SCIG based Wind Turbine Drives Amandus Bach PGS of RWTH Aachen University | 11:45 | Experimental Study of Roller Bearing Raceway Indentation on 11:45 Bearing Life Xinrun Liu Technical University of Denmark | |
| | Design of a Tooth Flank Fracture Critical Testing Gear Set under Reverse Loading Johannes Rolzhäuser WZL of RWTH Aachen University | 12:10 | nics and Stray (| Evaluation of DC Wind Turbine Concepts for coupling Wind Energy with Electrolysis Florian Andresen PGS of RWTH Aachen University | 12:10 | 12:10 Numerical simulation of ring creep on a wind turbine main shaft Peter Grosse Fraunhofer Institute for Wind Energy Systems | |
| Gearbox I Andreas Klein | Tooth Flank Fracture in a Wind Turbine Gearbox: A Failure Analysis Sascha Rommel FZG of Technical University of Munich | 12:35 | Power Electro Chong Ng | Experimental quantification of parasitic currents in the HSS bearings of a wind turbine gearbox Maximilian Zweiffel CWD of RWTH Aachen University | 12:35 | 12:35 Fretting wear test of three-row roller bearings based on equivalent model Chenhao Guan Tsinghua University | |
| | Lunch Break | 13:00 | | Lunch Break | 13:00 | Lunch Break 13:00 | |
| | Elastic Interaction in Planetary Stages with Increased Torque Density Sebastian Reisch Flender GmbH - Winergy | 14:00 | | Wind Turbine Gearbox Digitalization Trends and Case Studies to Lower the Cost of Energy Douglas Guthrie Vestas Nacelles Deutschland GmbH | 14:00 | 14:00 Advancements in Powertrain Test Design and Implementation Jonathan Hughes Offshore Renewable Energy Catapult | |
| Gearbox II Andreas Weber | Dynamic embedding process of friction enhancing hard particles in frictional connections Jonathan Schanner TU Chemnitz | 14:25 | elligence | DIGIT-BENCH Digital Twin: Advancing the Large-Scale Testing Facilities for the Wind Industry Elif Ecem Bas R&D Test Systems | 14:25 | HyDrive: Continously Variable Hydraulic Power-Split Drivetrain for Wind Turbines Pascal Seifermann & Alexander Dam Hamburg University of Applied Sciences | |
| | High Detail System Level CFD-Lubrication Analysis of Wind Turbine Gearboxes Martin Cardaun NGC Transmission Europe GmbH | 14:50 | nd Artificial Inte e | New Al approaches enabling Advanced Condition Monitoring of Wind Turbine Gearboxes Florin Tatar ZF Wind Power Antwerpen NV | 14:50 | Characterizing Wind Turbine Drivetrain Nonlinearities for Hybrid Nacelle Tests Muhammad Omer Siddiqui Fraunhofer Institute for Wind Energy Systems | |
| | Multiobjective mechanical wind turbine gearbox design optimization to reduce component damage risk during grid faults Pascal Bußkamp CWD of RWTH Aachen University | 15:15 | Digitalization a Christian Kunz | Framework for Al-Driven Image Analysis Systems for Gearbox endoscopy inspections Lars Osterbrink LATODA | 15:15 | Quantification of smearing risk for tapered roller bearings in wind turbine gearboxes during grid faults Emircan Yazici CWD of RWTH Aachen University | |
| | Coffee Break | 15:40 | | Coffee Break | 15:40 | Coffee Break 15:40 | |
| | Synergies of Parametric Optimization and Topology Optimization for Tonality Free Wind Turbines Philip Becht ZF Wind Power Antwerpen NV | 16:10 | 0 | Main bearing fatigue sensitivity to wake effects in a waked 15 MW floating wind turbine Veronica Liverud Krathe Norwegian University of Science and Technology | 16:10 | 16:10 Unique concept of a planetary plain bearing test bench Fabian Renger & Marco Könekamp RENK Test System GmbH, MSE of RWTH Aachen University | |
| Noise, Vibration, HarshnessII Christian Westphal | Deep learing approach to efficiently solve wind turbine acoustic tonalities Philipp Zech Wölfel Engineering GmbH + Co.KG | 16:35 | je nann | A Comparative Fully-Coupled Analysis of Dynamic Behaviours for a 15-MW Wind Turbine on a Bottom-Fixed Monopile and a Semi-Submersible Floating Foundation Jinqiu Pan, CWD of RWTH Aachen University | 16:35 | Efficient dynamic simulations of planetary journal bearings in 16:35 wind turbine gearboxes Mattheus Lucassen MSE of RWTH Aachen University | |
| | Machine Learning methods for the design of excitation-optimized gears in Wind-Energy gearboxes Frederik Stachowske Eickhoff Bergbautechnik GmbH | 17:00 | Floating Turbir Nicholas Kaufr | Efficient CFD Simulation & Optimization of a complete Floating Wind Turbine Frederic Spieß SIMERICS GmbH | 17:00 | Image: Constraint of the second se | |
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