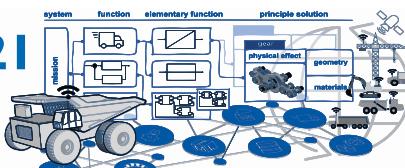


CWD 2021

ATK 2021

Conference Program Overview

last updated 28 February 2021



Tuesday - 09 March 2021

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Day	Start	End	Titel	Presenter/Chair	Company	Documents	Titel	Presenter/Chair	Company	Documents	Titel	Presenter/Chair	Company	Documents
09:00	10:00	10:00	Keynote Session I	Georg Jendek	MSE/CWD									
09:00	10:00	10:00	Welcome to CWD 2021	Georg Jendek	MSE/CWD									
09:00	10:00	10:00	MSE – Challenges at Success Factors	Joerg Bechtel	Center for Systemic Engineering									
09:00	10:00	10:00	Industrial Case Studies	Georg Jendek	MSE/CWD									
09:00	10:00	10:00	Is MSE a useful method to develop drive train?	Christian Guenther	Bauhaus University Weimar									
09:00	10:00	10:00	MBSE – Structure of a system model	Georg Jendek	MSE / RWTH Aachen University									
09:00	10:00	10:00	Parametric MBSE based approach for early design space exploration of Aircrafts and Industrial Systems	Alexander Mitrofanov	Airbus / Center R&T									
10:00	10:30	10:30	Conference opening	Georg Jendek	Institute for Machine Elements and Systems Engineering, RWTH Aachen University									
10:30	10:45	10:45	Coffee Break											
10:45	11:15	11:15	System Modelling & Methods	Christian Muggen	CONTACT Software GmbH									
10:45	11:15	11:15	Performance Analysis in Model based Development	Kai Hölzl	Siemens AG - Corporate Technology									
11:15	11:45	11:45	Requirements Generation with Closed Loop Systems	Mario Di Maio	TH Ingolstadt									
11:15	11:45	11:45	sysM 2.0	Christian Muggen	CONTACT Software GmbH									
12:15	12:45	12:45	Mechanical concept development using principle solution	Thilo Zeebe	MSE / RWTH Aachen									
12:45	12:45	12:45	Lunch Break											
13:15	14:15	14:15	System Modelling - Applications	Christian Muggen	CONTACT Software GmbH									
13:15	14:15	14:15	Conceptual introduction of required development capabilities in Model Based Systems Engineering	Marvin Schmitt	Fraunhofer IPK									
13:45	14:15	14:15	Optimization-based Component Sizing Method for Electrified Heavy Duty Powertrain Concepts	David Roth	MSE / RWTH Aachen									
14:15	14:45	14:45	Role model of model-based systems engineering	Dominik Wachtl	Paderborn University, Heinrich Heine Institute									
14:45	15:15	15:15	Model-Based Design for Cyber Physical Systems Applied to an Electric-Mechanical Coolant Pump	Gregor Höpfer	RWTH Aachen University, Institute for Machine Elements and Systems Engineering									
15:15	15:25	15:25	Coffee Break											
15:30	17:30	17:30	Digital Twins and Simulation - Fatigue	Lothar Lüdemann	Postus Petrolub SE									
15:30	17:30	17:30	Investigation on Wear and Micro-Pitting Behavior of Gear Wheel Materials	Michael Gehler	Deutsche Zentrale für Luft- und Raumfahrt (DLR)									
16:00	17:30	17:30	Extended Evaluation of Pitting Degradation Tests to increase the Remaining Useful Life of Gear Wheels	Yvonne Grögerling	Ubstadt Stuttgart									
16:00	17:30	17:30	Investigation of lubricated supply in rolling point contacts under startup conditions using CFD simulations	Dennis Fischer	RWTH Aachen University, Institute for Machine Elements and Systems Engineering									
17:00	17:30	17:30	Influences on cathodic and energetic WEC fatigue	Jörg Losk	Schaeffler Technologies AG & Co. KG									

Wednesday - 10 March 2021

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09:00	09:30	09:30	Coffee Break											
09:30	10:00	10:00												
10:00	10:30	10:30												
10:30	10:45	10:45	Coffee Break											
10:45	11:45	11:45	Digital Twins and Simulation - Vibration and Noise I	Marco Hamm	GLAAS Industrielektronik GmbH									
10:45	11:15	11:15	New methods to simulate NVH of gearboxes with planetary stages	Jonas Fleischer	Schaeffler Technologies AG & Co KG									
11:15	11:45	11:45	Numerical Transfer Function for NVH System	Gernot Pasch	MSE / RWTH Aachen									
11:45	12:15	12:15	Investigations on the rolling bearing cage dynamics with regard to different operating conditions and cage properties	Sebastian Schweizer	Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)									
12:15	12:45	12:45	Influence of Model Detail Level on the Propulsion Quality	Pascal Ditsch	MSE / RWTH Aachen									
12:45	12:45	12:45	Development of a measured sound of an Electrified Passenger Car Powertrain	Marcus Jäger	BMW Group									
12:45	12:45	12:45	Lunch Break											
13:15	14:15	14:15	Digital Twins and Simulation - Vibration and Noise II	Oliver Koch	Bosch Rexroth AG & Co. KG									
13:15	14:15	14:15	Dynamical simulation of rolling bearing cages for high speed applications	Bodo Nahrn	Schaeffler Technologies AG & Co. KG									
14:15	14:45	14:45	Active vibration control of elevating drives with gear backlash	Markus Speigelmayer	TU Dresden, Institute of Machine Elements and Machine Design (IME)									
14:45	15:15	15:15	Acoustic Optimization of a Power Take-off Gear Box	Stefan Wiesmann	Institut für Maschinenmechanik und Systemtheorie (IMM), RWTH Aachen University									
15:15	15:15	15:15	Stiffness and damping of roller bearing single contact	Seydinarhmed Valaee	Institut für Maschinenmechanik und Systemtheorie (IMM), RWTH Aachen University									
15:15	15:25	15:25	Coffee Break											
15:30	16:00	16:00	Digital Twins and Simulation - Wear and Friction	Andreas Neuner	Bosch Rexroth AG									
15:30	16:00	16:00	Fault detection for sliding bearings using acoustic emission signals and machine learning methods	Florian König	RWTH Aachen University, Institute for Machine Elements and Systems Engineering									
16:00	17:00	17:00	tribological analysis of the plain bearings in an external gear pump	Lars Brinkmann	Bosch Rexroth AG									
16:00	17:00	17:00	Influences on the Lubricant Supply of Grease Lubricated Rolling Contact Components	Benedikt Johannes Seewert	Gear Research Centre (ZGD), Technical University of Berlin									
17:00	17:30	17:30	Investigation of the base of hydrodynamic plain bearings under load using a high-speed camera and industrial oil analysis	Stephan Kroll	RWTH Aachen University, Digital Additive Production DAP									

Thursday - 11 March 2021

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Day	Start	End	Titel	Presenter/Chair	Company	Documents	Titel	Presenter/Chair	Company	Documents	Titel	Presenter/Chair	Company	Documents
09:00	11:00	11:00	Digital Twins and Simulation - Drive Train Concepts	Eckart-Angelo Werner	Index GmbH									
09:00	09:29	09:29	Optimization of powertrain efficiency of a power split hybrid drive for railcars	Henrik Hornung	MSE / RWTH Aachen									
09:29	10:45	10:45	Control and strategy of a new powertrain for Marco Reuter	BOFAAG GmbH										
09:29	10:45	10:45	Experimental validation of a new design concept for Stefan Gaffoy	Institut für Fertigungstechnik und Systeme (IfAS), RWTH Aachen University										
10:29	10:59	10:59	Development of a digital ecosystem for a serial planetary gearbox to determine technical product characteristics	Philipp Abele	SEW-EURODRIVE GmbH & Co. KG									
11:15	11:30	11:30	Coffee Break											
11:30	11:45	11:45	Digitalization and Condition Monitoring Systems	Frank Knoll	EMG GmbH & Co.KG									
11:45	14:45	14:45	Sensor Data Analytics to support Predictive Maintenance	Thomas Kemmerich	HBK - Holzger, Bräat & Kjær GmbH									
14:45	14:45	14:45	Staphy Synthesis: Learning DNN Potential of Wind Turbines	Egor Geist	ExxonMobil Petroleum & Chemicals BV									
14:45	14:45	14:45	Simulation-Based Data Sampling for Condition Monitoring of Fluid Power Drives	Fareed Makani	Institute for Fluid Power Drives and Systems (IFAS), RWTH Aachen University									
14:45	15:15	15:15	Damage Diagnosis of Captain Shafts in Mobile Mining Machines using Vibration Analysis	Reza Golafshani	MSE / RWTH Aachen									
15:15	15:25	15:25	Lunch Break											
15:30	16:18	16:18	Applications + Predictive Maintenance I	Katharina Schmitz	RWTH Aachen University, Institute for Fluid Power Drives and Systems (IFAS)									
15:30	16:18	16:18	How bolted joints can be fast, save and smart	Birk Brockmann	Maschinenfabrik Wagner GmbH & Co. KG									
16:00	16:45	16:45	Digitalization in the supply chain	Thomas Zapp	GreenGate AG									
16:45	17:00	17:00	Global patent trends in the wind industry - what's going on and why you should care	Christian Metzger	Grätzel Metzger Münchingen von Poschinger Patententeilwerk									
17:00	17:15	17:15	From installation to remanufacturing - realizing a circular economy for automotive lubrication systems in wind turbines	Michael Strelitzki	SKF Lubrication Systems Germany GmbH									
17:15	17:30	17:30	Safe and reliable lifting technology: Supply chain of a wind turbine foundation	Jens Christensen	RUD Ketteln GmbH & Co									
17:30	17:45	17:45	Lunch Break											
17:45	18:18	18:18	Wear & Tear - Predictive Maintenance I	Joerg Deckers	Pander GmbH									
17:45	18:18	18:18	Enabling lean cell for your wear! Insights in Predictive Maintenance from experiences	Joerg Deckers	Pander GmbH									
18:00	18:30	18:30	Benefits and Challenges of Infrared Bearing Diagnostics	Gero Burghardt	CEROBEAR GmbH									
18:00	18:30	18:30	What's Wrong? Gear Bearing Failure, Root Cause Identification of High-Rate Lubricated Compounds	Baher Azzaan	CWD – Center for Wind Power Drives									
18:30	18:30	18:30	Improved Oil Condition Monitoring of Industrial Gear Oils	Rüdiger Krebs	QIDoc GmbH									

Contact

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Presentation Slides available



Extended Abstract available



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