

BEARING WORLD

by FVA

The Expert Forum for Rolling and Plain Bearings Online Event

BEARING WORLD by FVA – The Third expert forum “Industrial Research and Science in Dialogue with Practical Application”, focusing on the topic of bearings in theory and application.

ONLINE FROM 19 TO 23 OCTOBER, 2020
VIRTUAL PRESENTATIONS & EXHIBITION

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Program Day 1

9:00 AM

OPENING

PROF. BERND SAUER

TUNIVERSITY OF KAISERSLAUTERN, INSTITUTE OF
MACHINE ELEMENTS, GEARS AND TRANSMISSIONS (MEGT)
GERMANY

CHRISTIAN KUNZE

RESEARCH ASSOCIATION FOR DRIVE TECHNOLOGY E.V.
(FVA)
GERMANY

9:30 AM

KEYNOTE

"BEYOND SIMULATIONS – USING AI ON PROCESS DATA TO
PREDICT PERFORMANCE"

PH.D. VICTORIA VAN CAMP

AB SKF
SWEDEN

10:00 AM

"THE LUBRICANT FORMULATION: ONE DRIVER FOR EARLY
DAMAGE ASSOCIATED TO WECS IN THRUST AND RADIAL
BEARINGS"

DR. ARNAUD RUELLAN

SKF
NETHERLANDS

10:35 AM

"THE INFLUENCE OF MECHANICAL STRESSES ON THE
DIFFUSION AND ACCUMULATION OF HYDROGEN IN A
CYLINDRICAL ROLLER THRUST BEARING"

DR. IYAS KHADER

FRAUNHOFER INSTITUT FOR MECHANICS OF MATERIALS
(IWM)
GERMANY

BEARING WORLD FOCUSES ON ALL
FACETS OF BEARINGS AND ALL
INVOLVED COMPONENTS, WITH
SPECIAL EMPHASIS ON ROLLING
BEARINGS – IN COMBINATION WITH
OR COMPARISON TO PLAIN OR
MAGNETIC BEARINGS.

TOPICS 2020

BEARING DURABILITY AND DIMENSIONING
BEARING MECHANICS
BEARING SELECTION AND DESIGN
CONDITION MONITORING AND SENSORS
ELECTRIC DRIVE TECHNOLOGY / CHALLENGES TO BEARINGS
NVH (NOISE, VIBRATION, HARSHNESS)
PREMATURE ROLLING ELEMENT BEARING FAILURES
ROLLING CONTACT FATIGUE AND MATERIALS
TRIBOLOGY AND FLUID DYNAMICS

11:10 AM

"INVESTIGATIONS OF ZDDP TRIBOFILM FORMATION
REGARDING TEMPERATURE INFLUENCES"

Dr. Florian Pape

Leibniz University Hanover, Institute of Machine
Design and Tribology, IMKT
GERMANY

11:45 PM

"CALCULATION METHOD TO EVALUATE THE RISK ON WEC
FAILURE OCCURRENCE IN INDUSTRIAL APPLICATIONS"

DIPL.-ING. DIRK-OLAF LEIMANN

BELGIUM

12:10 PM

LUNCH BREAK

2:00 PM

"INVESTIGATION OF THE DAMPING CHARACTERISTICS IN
THE DRY LUBRICATED ROLLING ELEMENT - CAGE
CONTACT OF DEEP GROOVE BALL BEARINGS"

M.Sc. Rahul Dahiwal

TECHNICAL UNIVERSITY OF KAISERSLAUTERN INSTITUTE
OF MACHINE ELEMENTS, GEARS AND TRANSMISSIONS
GERMANY

2:35 PM

"BEARING RACEWAY WAVINESS INDUCED NOISE IN
APPLICATIONS"

MECHANICAL ENGINEER ANGELICO APPROSIO

SKF INDUSTRIE S.P.A.
ITALY

3:10 PM

"BALLS CHARACTERISTICS IMPACT ON BEARING NOISE
GENERATION"

SEBASTIANO RIZZO

TSUBAKI NAKASHIMA CO., LTD.
ITALY

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Program Day 2

09:55 AM

WELCOME

10:00 AM

"SURFACE MUTATION OF THE BEARING RACEWAY DURING ELECTRICAL CURRENT PASSAGE IN MIXED FRICTION OPERATION"

M.ENG., SIMON GRAF

UNIVERSITY OF KAISERSLAUTERN,
INSTITUTE OF MACHINE ELEMENTS, GEARS, AND
TRANSMISSIONS (MEGT)
GERMANY

10:35 AM

"LOW TEMPERATURE TEST METHODS FOR ELECTRIC CAR BEARING GREASES"

THOMAS LITTERS

FUCHS SCHMIERSTOFFE GMBH
GERMANY

11:10 AM

"ENHANCEMENT OF THE INSULATION PROPERTIES OF THERMAL SPRAYED CERAMIC BEARING COATINGS"

M. SC. ELISA BURBAUM

RWTH AACHEN UNIVERSITY, SURFACE ENGINEERING
INSTITUTE (IOT)
GERMANY

11:45 AM

"EXPERIMENTAL HIGH FREQUENCY ANALYSIS OF THE ELECTRIC IMPEDANCE OF ROLLING BEARINGS"

Georg Martin

TECHNICAL UNIVERSITY OF DARMSTADT, INSTITUTE FOR
PRODUCT DEVELOPMENT AND MACHINE ELEMENTS (PMD)
GERMANY

12:10 PM

LUNCH BREAK

2:00 PM

"AN ANALYTICAL APPROACH FOR THE INFLUENCE OF THE REAL FILM THICKNESS DISTRIBUTION ON THE CAPACITANCE OF AN EHL CONTACT"

VOLKER SCHNEIDER

LEIBNIZ UNIVERSITY HANNOVER, INSTITUTE OF MACHINE
DESIGN AND TRIBOLOGY (IMKT)
GERMANY

2:35 PM

"AN INTELLIGENT HYBRID PLAIN BEARING AS A SMART MACHINE COMPONENT"

M.SC. ROBIN KURTH

FRAUNHOFER INSTITUTE FOR MACHINE TOOLS AND
FORMING TECHNOLOGY (IWU)
GERMANY

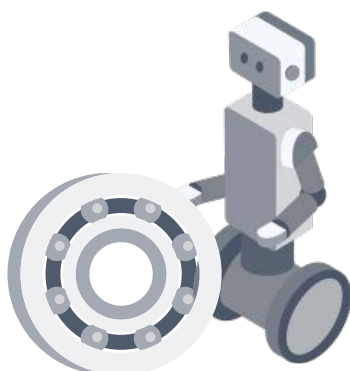
3:10 PM

"NOVEL ANALYTICAL AND NUMERICAL CALCULATIONS IN TRUNCATED CONTACT"

DR. LUC HOUPERT

BEARING AND TRIBOLOGY CONSULTANT
FRANCE

THE CONFERENCE PROMOTES
THE EXCHANGE OF KNOWLEDGE AND
EXPERIENCE BETWEEN UNIVERSITIES
AND ENGINEERS FROM THE INDUSTRY
WHO ARE INVOLVED IN OR RESPONSIBLE
FOR THE DESIGN, DEVELOPMENT,
MANUFACTURING AND ASSEMBLY OR
THE PRACTICAL OPERATION OR
MAINTENANCE OF BEARINGS.



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Program Day 3

10:30 AM

WELCOME

10:35 AM

"EVALUATION OF THE INFLUENCE OF NON-METALLIC INCLUSIONS ON THE HIGH AND VERY HIGH CYCLE FATIGUE LIFE OF INDUCTIVE HARDENED BEARING STEEL IN MULTI-MEGAWATT WIND TURBINES"

FELIX STERN

TU DORTMUND UNIVERSITY DEPARTMENT OF MATERIALS TEST ENGINEERING (WPT)
GERMANY

11:10 AM

"FATIGUE DAMAGE DEVELOPMENT IN BEARING STEEL: MODELLING AND MEASUREMENT"

DR. IR. ERIK VEGTER

SKF
NETHERLANDS

11:45 AM

"DEVELOPMENT OF OPTIMIZED NITRIDED BEARING AND TRANSMISSION COMPONENTS FOR A BETTER APPLICATION PERFORMANCE: FROM PROCESS PARAMETERS TO FUNCTIONAL PERFORMANCE PROPERTIES"

DR. CHRISTINE SIDOROFF-COICAUD

NTN-SNR ROULEMENTS
FRANCE

SIMON THIBAUT

NTN-SNR ROULEMENTS
FRANCE

12:10 PM

LUNCH BREAK

2:00 PM

"FINITE ELEMENT ANALYSIS OF TWO-STEP DEEP ROLLING OF BEARING STEEL FOR EXPANSION AND EQUALIZATION OF COMPRESSIVE RESIDUAL STRESS PROFILES"

JOSHUA SIMON

UNIVERSITY OF APPLIED SCIENCE WÜRZBURG-SCHWEINFURT
GERMANY

2:35 PM

"PROGRESSION OF ROLLING CONTACT FATIGUE DAMAGE FROM ARTIFICIAL INDENTS IN HYBRID AND STEEL-TO-STEEL BEARING CONTACT"

DR YURI KADIN

SKF GMBH
NETHERLANDS

3:10 PM

"MICROSTRUCTURAL ANALYSIS OF BEARING STEELS BY A STATISTICAL NANOINDENTATION TECHNIQUE"

PROF. DR. ESTEBAN BROITMAN

SKF
NETHERLANDS

"COME TO BEARING WORLD, THE INTERNATIONAL EXPERT FORUM DEDICATED TO BEARINGS; FOCUSING THIS TIME ON ROLLING BEARINGS. THE CONFERENCE PROVIDES A COMPREHENSIVE OVERVIEW OF THE STATE OF TECHNOLOGY, RESEARCH, AND DEVELOPMENT. HERE YOU WILL HAVE THE OPPORTUNITY TO ENTER INTO DIALOG WITH LEADING NATIONAL AND INTERNATIONAL EXPERTS."

PROF. DR.-ING. GERHARD POLL, LEIBNIZ UNIVERSITY
HANNOVER, BEARING WORLD
PROGRAM COMMITTEE SPEAKER



Program Day 4

10:30 AM

WELCOME

10:35 AM

"VALIDATION OF A NOVEL CONICAL SLIDING BEARING FOR THE MAIN SHAFT OF WIND TURBINES"

M.SC. TIM SCHRÖDER

RWTH AACHEN, CHAIR FOR WIND POWER DRIVES
GERMANY

11:10 AM

"IF FORM DEVIATION THAN CORRECT - THE UTILIZATION OF PRODUCTION-RELATED DEFECTS FOR IMPROVING OPERATING PROPERTIES OF JOURNAL BEARINGS"

LARS FRIEDRICH

CHEMNITZ UNIVERSITY OF TECHNOLOGY, INSTITUTE OF DESIGN ENGINEERING AND DRIVE TECHNOLOGY (IKAT)
GERMANY

11:45 AM

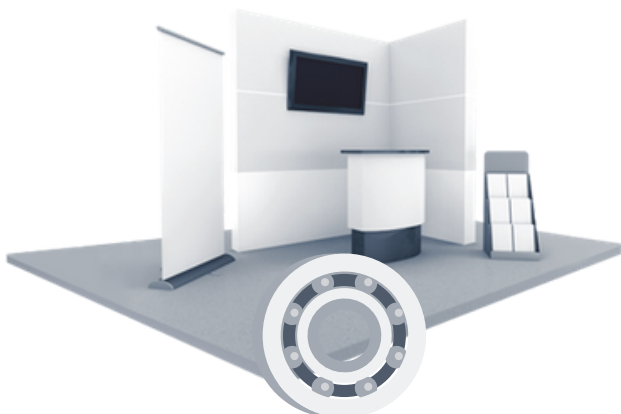
"BEARING SELECTION FOR HIGH EFFICIENCY WORM GEAR DRIVES"

JUN. PROF. DR.-ING. MANUEL OEHLER

UNIVERSITY OF KAISERSLAUTERN, INSTITUTE OF MACHINE ELEMENTS; GEARS AND TRANSMISSIONS (MEGT)
GERMANY

12:10 PM

LUNCH BREAK



2:00 PM

"3D CFD MODELLING OF TEXTURED HYDRODYNAMIC JOURNAL BEARINGS"

M.SC. PATRICK WIECKHORST

OTTO-VON-GUERICKE-UNIVERSITY MAGDEBURG, CHAIR OF MACHINE ELEMENTS AND TRIBOLOGY
GERMANY

2:35 PM

"SMEARING IN FULL COMPLEMENT ROLLER BEARINGS"

DR. NADINE NAGLER

BOSCH REXROTH AG
GERMANY

3:10 PM

"FRICTIONAL PROPERTIES OF GREASE ADDITIVATED BY GRAPHENE PLATELETS IN ANGULAR CONTACT BALL BEARINGS"

DR. FLORIAN PAPE

LEIBNIZ UNIVERSITY HANNOVER, INSTITUTE OF MACHINE DESIGN AND TRIBOLOGY (IMKT)
GERMANY

THE CONFERENCE'S VIRTUAL EXHIBITION PROVIDES COMPANIES WITH AN EXCELLENT PLATFORM TO PRESENT THEIR BUSINESSES TO A PROFESSIONAL AUDIENCE FROM RESEARCH AND INDUSTRY. AT VIRTUAL BOOTHS, EXHIBITORS CAN CHAT WITH VISITORS AND PROVIDE DOWNLOADS, IMAGES AND VIDEOS.

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Program Day 5

9:55 AM

WELCOME

10:00 AM

"INVESTIGATION OF WIND TURBINE PLANETARY BEARING OUTER RING CREEP ON A COMPONENT TEST BENCH"

M.SC. FELIX M. SCHLÜTER

RWTH AACHEN UNIVERSITY, CENTER FOR WIND POWER DRIVES
GERMANY

10:35 AM

"INVESTIGATION OF THE LOAD DISTRIBUTION ON A PLANETARY CARRIER BEARING OF A WIND TURBINE GEARBOX TO IDENTIFY TRIGGER FOR RING CREEP"

JONAS GNAUERT

RWTH AACHEN UNIVERSITY, CHAIR FOR WIND POWER DRIVES
GERMANY

11:10 AM

"A FATIGUE LIFE MODEL FOR ROLLER BEARINGS IN OSCILLATORY APPLICATIONS"

GEORG BRESLAU

TECHNICAL UNIVERSITY DRESDEN, INSTITUTE OF MACHINE ELEMENTS AND MACHINE (IMM)
GERMANY

11:45 AM

"APPLICATION-DEPENDENT BEARING PRELOAD IN PLANETARY GEAR UNITS – APPLICATION, DESIGN AND ASSEMBLY"

ERMAL T LAMAJ

SEW-EURODRIVE GMBH & CO KG
GERMANY

12:10 PM

LUNCH BREAK

2:00 PM

"MEASURING THE KINEMATIC BEHAVIOR OF SPINDLE BEARING ROLLING ELEMENTS UNDER RADIAL LOADS"

M. SC. HANS-MARTIN ECKEL

RWTH AACHEN UNIVERSITY, LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL)
GERMANY

2:35 PM

"DEVELOPMENT OF A METHODOLOGY FOR TOLERANCING RADIAL JOURNAL BEARING SYSTEMS"

MARKO EBERMANN

CHEMNITZ UNIVERSITY OF TECHNOLOGY, INSTITUTE OF DESIGN ENGINEERING AND DRIVE TECHNOLOGY (IKAT)
GERMANY

3:10 PM

"A NEW APPROACH FOR RAPID DETERMINATION OF ROLLER-FLANGE CONTACT IN ROLLER ELEMENT BEARINGS"

MARIUS WOLF

ROBERT BOSCH GMBH
GERMANY

3:35 PM

CLOSING

PROF. BERND SAUER

UNIVERSITY OF KAISERSLAUTERN, INSTITUTE OF MACHINE ELEMENTS, GEARS AND TRANSMISSIONS (MEGT)
GERMANY

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