



11th International Conference
VIBRATIONS IN ROTATING MACHINES
 Magdeburg, Germany | 23th-25th February 2015

Date: Monday, 23/Feb/2015

9:00am **Chairmen's Welcome and Introduction**
 - Location: **G16 H5**

9:30am

9:30am **Keynote**
 - Location: **G16 H5**

10:30am

10:30am **Refreshments**

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11:00am

11:00am **Torsional vibrations**
 - Location: **G16 H5**

Gearboxes/-wheels
 Location: **G16 215**

12:30pm

Torsional Vibration Problem in Reciprocating compressor - Case Study
Boru, Fikre; Lenz, Johann

ZahnradSchwingungen und der Doppler-Effekt
Elbs, Michael; Sterns, Dietmar

Required simulation model detail to achieve reliable simulation results
Rosenlöcher, Thomas; Schlecht, Berthold

Analysis of Systems with Complex Gears
 Kosenkov, Alexander; Gaulard, Frédéric; Schmied, Joachim

Modal component mode synthesis in torsional vibration analysis: rotor-blade interaction
Dohnal, Fadi; Nordmann, Rainer; Knopf, Eric

12:30pm

Lunch

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2:30pm

2:30pm **Gas Foil Bearings I**
 - Location: **G16 H5**

3:30pm

A numerical performance analysis of a gas foil bearing including structural modifications by applying metal shims
Hoffmann, Robert; Pronobis, Tomasz; Liebich, Robert

On the Stability of Balanced Rigid Rotors in Air Foil Bearings
Baum, Christoph; Hetzler, Hartmut; Seemann, Wolfgang

3:30pm

Refreshments

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4:00pm

4:00pm **Gas Foil Bearings II**
 - Location: **G16 H5**

5:00pm

Lateral Dynamics of Flexible Rotors Supported by Controllable Gas Bearings – Theory & Experiment
Pierart, Fabian Gonzalo; Santos, Ilmar Ferreira

On the Numerical Simulation of Nonlinear Transient Behavior of Compliant Air Foil Bearings
 Larsen, Jon Steffen; Nielsen, Bo Bjerregaard; Santos, Ilmar Ferreira

Date: Tuesday, 24/Feb/2015

9:00am Turbochargers I
- Location: G16 H5

10:30am

Modellabgleich eines Turboladerrotors in Schwimmbuchsenlagerung anhand gemessener Schwimmbuchsendrehzahlen

Köhl, Wolfgang; Kreschel, Martin; Filsinger, Dietmar

Oil Flow in Connecting Channels of Floating Ring Bearings

Eling, Rob; Van Ostayen, Ron; Rixen, Daniel

Validierung der Hochlaufsimulation für automotive Abgasturbolader

Daniel, Christian; Woschke, Elmar; Nitzschke, Steffen; Strackeljan, Jens; Driot, Nicolas; Braun, Karl-Ludwig; Koutsovasilis, Panagiotis

10:30am

Refreshments

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11:00am

11:00am Special Problems

Location: G16 H5

Controlled systems

Ort: G16 215

12:30pm

Modellierung von nichtlinearen amplituden- und frequenzabhängigen Hysterese-Effekten von Gummibauteilen und ihre Verwendung in Mehrkörpersimulationen von Frontladerwaschgeräten

Heine, Christopher; Plagemann, Markus

Vergleich der Eignung von Sensoren zur Störgrößenaufschaltung an einem Rotorsystem mit aktiven piezoelektrischen Lagern

Heindel, Stefan; Becker, Fabian Benedikt; Potrafke, Timo; Rinderknecht, Stephan

Unterscheidung verschiedener Fehlerarten beim modellbasierten Monitoring

Thümmel, Thomas; Rossner, Markus; Ulbrich, Heinz; Rixen, Daniel

Modal damping identification of a gyroscopic rotor in active magnetic bearings

Mikota, Gudrun; Pröll, Andreas Josef; Silber, Siegfried

Ganzheitlicher Virtual Engineering Ansatz zur Schwingungs- und Akustiksimulation eines Verbrennungsmotors

Duvigneau, Fabian; Nitzschke, Steffen; Strackeljan, Jens; Gabbert, Ulrich

An analysis of precise positioning scenarios of the electromechanical rotating system driven by a stepping motor

Konowrocki, Robert; Pochanke, Andrzej; Pręgoska, Agnieszka; Szolc, Josef; Silber, Siegfried

12:30pm

Lunch

-

2:30pm

2:30pm Turbochargers II

Location: G16 H5

Rotor dynamics I

Location: G16 215

3:30pm

Turbocharger rotors with oil-film bearings: sensitivity and optimization analysis in virtual prototyping

Koutsovasilis, Panagiotis

Anforderungen an moderne Laborzentrifugen

Strackeljan, Jens; Behr, Dietrich

DoE basierte Sensitivitätsanalyse konstruktiver Lagerparameter eines gleitgelagerten Abgasturboladers

Göbel, Stefan; Daniel, Christian; Woschke, Elmar; Strackeljan, Jens

Chaotic and stable orbits of a rotor in a non-conventional back-up bearing. A numerical and experimental approach

Fonseca, Cesar A.L.L.; Aguiar, Romulo R.; Weber, Hans I.

3:30pm

Refreshments

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4:00pm

4:00pm Turbochargers III

Location: G16 H5

Rotor dynamics II

Location: G16 215

5:00pm

Influence of axial grooves in floating-ring-bearings on the nonlinear oscillations of turbocharger rotors

Nowald, Gerrit; Boyaci, Aydin; Schmoll, Robert; Koutsovasilis, Panagiotis; Driot, Nicolas; Schweizer, Bernhard

Einfluss der Lagergehäusesteifigkeit auf das Schwingverhalten eines 2-poligen Elektromotors

Kalinowski, Piotr; Krzysteczko, Lukas; Ulbrich, Benjamin Gottfried

Analyse der Einflüsse der hydrodynamischen Axiallagerung auf das rotordynamische Verhalten eines PKW-Abgasturboladers

Li, Shuo; Tuzcu, Sedat; Klaus, Michael; Rienäcker, Adrian; Schwarze, Hubert

Modellgestützte instationäre Unwuchtidentifikation

Siegl, Benjamin; Markert, Richard

Date: Wednesday, 25/Feb/2015

9:00am Journal Bearings

- Location: **G16 H5**

10:30am

Fluid-Struktur-Kopplung in elasto-hydrodynamischen Gleitlagern

Krinner, Andreas; Schindler, Thorsten; Rixen, Daniel J.

Experimental Identification of Dynamic Coefficients of Tilting-Pad Bearings with Active Lubrication

G. Salazar, Jorge; C. Varela, Alejandro; F. Santos, Ilmar

High Speed Journal Bearings -- State of the Art of Calculations

Fuchs, Andreas; Kosenkov, Alexander; Schmied, Joachim

10:30am Refreshments

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11:00am

11:00am Blade Vibration

- Location: **G16 H5**

12:00pm

Detection of blade mistuning in a low pressure turbine rotor resulting from manufacturing tolerances and differences in blade mounting

Schönleitner, Florian; Traussnig, Lukas; Marn, Andreas; Heitmeir, Franz

Reliability analysis of mistuned blisks

Wagner, Nils; Helfrich, Reinhard

12:00pm Closure of conference

- Location: **G16 H5**

12:30pm

12:30pm Lunch

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2:30pm