TORSIONAL VIBRATION SYMPOSIUM

PRELIMINARY PROGRAM

4TH TORSIONAL VIBRATION SYMPOSIUM

MAY 14-16, 2025

SALZBURG CONGRESS | AUSTRIA

Organized by the

VIBRATION ASSOCIATION
Schwingungstechnischer Verein

in cooperation with

GEISLINGER® POWERTRAIN SOLUTIONS. BUILT TO LAST.

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KEYNOTE SPEAKERS

Prof. Dr. Robert Schlögl

President Alexander von Humboldt Foundation
Germany

Alexander Knafl, PhD

Senior Vice President MAN Energy Solutions
Germany

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AIM

The aim of the symposium is to organize a unique event for the international torsional vibration community. We welcome participants from all fields of torsional vibration research, especially from:

- MARINE
- POWER GENERATION
- RAIL TRACTION
- INDUSTRIAL APPLICATIONS
- ON & OFF HIGHWAY
- OIL & GAS
- COMPRESSION SYSTEMS

Wednesday: May 14, 2025

Program may be subject to change

18:00	Welcome Reception, Restaurant M32

Thursday: May 15, 2025

07:30	Registration Desk Opens
09:00	Official Opening
09:15	Keynote: Prof. Dr. Robert Schlögl President Alexander von Humboldt Foundation, Germany **Green Molecules**
10:00	Coffee Break, Exhibition Opens

	Session 1A: Engine Development	Session 1B: Noise, Vibration, Harshness (NVH)
10:30	**Torsional Vibration Aspects of Variable Compression Ratio on 2-Stroke Engines** R. Rusch, S. Virta WinGD Ltd.	**Acoustically Optimized Rubber Misalignment Couplings for Yachts and Marine Applications** T. Andogho VULKAN Kupplungs- und Getriebebau Bernhard Hackforth GmbH & Co. KG
10:55	**Enhanced Time-Domain Torsional Vibration Model Verification by Means of Cylinder Pressure Measurements** S. Persson MAN Energy Solutions	**Model-Assisted Experimental Determination of Elastomer Coupling Properties for Torsional Vibration Calculations** T. Rapp, D. Hilbk, H. B. Alaya VULKAN Kupplungs- und Getriebebau Bernhard Hackforth GmbH & Co. KG.

11:20	**Influence of Large-Bore Gas Engine Gensets on Grid Stability - Challenge or Storm in a Teacup?** J. Wolter, P. Böhm MAN Energy Solutions SE	**Full System Integrated Lateral Vibration Analysis for Marine Applications** M. Müller VULKAN Kupplungs- und Getriebebau Bernhard Hackforth GmbH & Co. KG
11:45	**Torsional Vibration Analysis of an Opposed-Piston Engine Architecture** B. B. Mahanta Cummins Inc.	**Proven Solutions to Reduce the Transfer of Structure Borne Sound in Couplings** N. Yazdandoost Geislinger GmbH
12:10	Lunch	

	Session 2A: Power System Simulation I	Session 2B: System Reliability – Case Studies I
13:10	**From Diesel to Modern Fuels - The Changes in Crankshaft Torsional Vibration** K. Buczek, M. Bartosik, B. Jagodzinski, S. Shah FEV Polska Sp. z o.o., FEV Europe GmbH, Software and Testing Solutions GmbH	**An Investigation into Engine Damage Using Torsional Shear Strain as a Means of Characterising Load Acceptance** J. Stainsby Lloyd's Register EMEA
13:35	**Coupled Simulations of Torsional Vibration and Elastic Mounting Systems** D. Hochlenert, M. Schuchardt Rolls-Royce Power Systems AG	**Study of OD Shaft (Oil Distribution Shaft) Damage Cases in CPP Marine Propulsion Plants** H. Amini, Ø. Alnes, E. Brodin Det Norske Veritas

14:00	**Visco-Elastic Finite Element Approach on Thermo-Mechanical Coupled Simulation and Validation in Rubber Coupling** M. Hasan, R. I. Zadoks REXNORD CENTA, Independent Consultant	**Validation of Fatigue Theory for a Propulsion Shaft Subject to Torsional Vibrations** G. Dahler, J. E. Kjær, G. M. Bakken DNV AS
14:25	Coffee Break	

	Session 3A: Powertrain Components - Elastic Couplings and Dampers I	Session 3B: Power System Simulation II
14:50	**Skip Firing as Challenge on Modern Powertrain Configuration** H.G. Flesch, M. Mehrgou, C. Mühlberger, et. al. AVL, Geislinger GmbH	**System-Modeling Marine Drivetrains: A Glimpse at the MBSE Approach at IME Aachen GmbH** B. Juretzki, M. Körber, T. Möller, et. al. IME Aachen GmbH
15:15	**Sustainable Solution by Reducing Idle Speed and Fuel Consumption in Crane Application with Super-Soft Rubber Coupling** M. Hasan REXNORD CENTA	**Temperature Effects on the Dynamic Stiffness and Damping of Carbon-Filled Elastomer Couplings** S. Bahr, G. Jacobs, G. Höpfner, S. Akbulut Institute for Machine Elements and Systems Engineering, RWTH Aachen
15:40	**Vibration Aspects of Different Power Take-Off Units for 2-Stroke Marine Propulsion Systems** R. Wilkie, D. Richter-Trummer, A. Thalhammer Geislinger GmbH	**Open-Source Software for Torsional Vibration Analysis** S. Laine Aalto University
16:05	Coffee Break	

	Session 4A: System Reliability - Case Studies II	Session 4B: Active and Passive Dampers
16:30	**Development of a Damage Model for the Lifetime Prediction of a Viscous Torsional Vibration Damper** A. Leib, B. Mokdad, Y. Peterschmitt Liebherr-Components Colmar SAS	**Active Damping of Torsional Vibrations** U. Ubaid Lloyd's Register EMEA
16:55	**Marine Propulsion Shafting Excessive Torsional Vibration: Case Study Revisited** B. Cowper, Z. Schramm LamaLo USA, LLP	**Improved Prediction of the Nonlinear Behavior of Silicone Oil in Viscous Dampers** M. Steidl, R. I. Zadoks, S. Willeke Hasse und Wrede GmbH, Independent Consultant
17:20	End of Thursday's Sessions	
18:00	Aperitif, Salzburg Residence Palace	
19:00	Gala Dinner, Salzburg Residence Palace	

Friday: May 16, 2025

08:00	Registration Desk Opens
09:00	Keynote: Alexander Knafl, PhD Senior Vice President MAN Energy Solutions, Germany **Decarbonising Large Bore Internal Combustion Engines**

	Session 5A: Marine Propulsion	Session 5B: Power System Simulation II
09:50	**Impact of Propeller Retrofits in the Torsional Vibrations of Marine Propulsion Shafting – Case Studies** K. Lal Mecklenburger Metallguss GmbH	**MEMS Gyroscope in Torsional Vibration Measurements** J. Köykkä, J. Määttä, P. Sundström, et. al. Wärtsilä Finland Oy
10:15	**Unveiling the Truth Behind First Order Dynamics and Alignment** M. Zeid BERG Propulsion	**Early Fault Detection Applied to Turbines, Pistons Engines, and Torque Evaluation** H. Saiah dataVIB Impédance
10:40	Coffee Break	

	Session 6A: Vibrations of Powertrains	Session 6B: Compressors
11:05	**Shudder in Wet Brakes and Clutches Caused by the Performance Loss of E-Drive Lubricants** J. Wirkner, M. Baese, A. Lebel, C. Besser, et. al. Technical University of Munich, Magna Powertrain GmbH & Co. KG, Austrian Centre of Competence for Tribology	**Electrical System Interaction Induced Torsional-Lateral Coupled Vibration at an Integrally Geared Compressor** R. Chumai Machinosis Company Limited
11:30	**Designing Synchronous Motor-Driven Trains Against Torsional Vibration** M. A. Corbo No Bull Engineering, PLLC	**Variable Inertia Effects on Torsional Vibration of Reciprocating Compressors** M. Thorn, T. Stephens Ariel Corporation
11:55	**Torsional Vibration Challenges in Parallel Hybrid Systems** M. Dylla, H. B. Alaya VULKAN Kupplungs- und Getriebebau Bernhard Hackforth GmbH & Co. KG	**High Vibration Of Integrally Geared Compressor Due to Variable Frequency Drive** T. Robertson, T. Feese Eagle LNG Partners, Engineering Dynamics Incorporated
12:20	**A Digital Twin for Torsional Vibrations of Power Plant Turbogenerators** S. Herold, H. Holzmann, R. Nordmann, P. Smeekes TU Darmstadt, Fraunhofer Institut LBF Darmstadt	**Simulation Based Dimensioning of Drivetrain Components in Motor-Driven Reciprocating Compressors** T. P. Holopainen, T. Ryyppö ABB Oy
12:45	Lunch	

	Session 7A: Powertrain Components II	Session 7B: Rules and Regulations
13:45	**Reciprocating Compressor Coupling Revamp: Advantages of Highly Flexible Elastomeric Couplings and Disadvantages of Steel Disc Couplings for Torsional Vibration Aspects** K. Kloos Neuman & Esser GmbH & Co. KG	**CIMAC Working Group 4 Crankshaft Rules – Current Activities** P. Böhm, T. Frondelius, J. Dowell, D. Bell, et. al. MAN Energy Solutions SE, Wärtsilä,Wabtec Corporation, Ricardo UK Ltd, Kobe Steel Ltd.
14:10	**Reduction of Torsional Vibration through Power Take-In System in Marine Shaft Generators** J. Kim HD Hyundai Heavy Industries	

	Session 8: Closing Session
14:35	**TVA Modelling Beyond the Deterministic Theory** A. Thalhammer, K. Bergmann Geislinger GmbH
15:00	Closing
15:10	Farewell Coffee
15:30	End

Saturday: May 17, 2025

08:45	Social Program: Hallstatt Tour (not included in the Symposium fee / Participation fee: EUR 150,- (excl. 20% VAT))

PARTICIPATION

We would be delighted to welcome you to the Torsional Vibration Symposium 2025 in Salzburg.

Early bird rate: EUR 1.100,-* (excl. 20% VAT, until February 25, 2025)
Standard rate: EUR 1.290,-* (excl. 20% VAT)

**The participation fee includes Welcome Reception, Gala Dinner, program booklet, digital proceedings, coffee breaks and lunch.*

EXHIBITION & SPONSORING

We can also offer a limited number of exhibition stands and sponsoring opportunities.

Exhibition floor space fees: EUR 520,- / m^2 (excl. 20% VAT, min. 6 m^2)

SYMPOSIUM LOCATION

Salzburg Congress | Auerspergstrasse 6 | 5020 Salzburg | Austria

EVENT MODERATION

Ulrich Walter

CONTACT

The organizer of the event is the

VIBRATION ASSOCIATION
Schwingungstechnischer Verein

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