

PRELIMINARY PROGRAM

4TH TORSIONAL VIBRATION SYMPOSIUM
MAY 14-16, 2025

SALZBURG CONGRESS | AUSTRIA

Organized by the

**VIBRA
ASSOCIA**TION
Schwingungstechnischer Verein

in cooperation with

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
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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, ENORISE 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 I - Elastic Couplings and Dampers	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 for R&D Engineering in the Four-Stroke division at 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, J. Klüss 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, J. Choi 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

08:15	Social Program: Hallstatt Tour (not included in the Symposium fee / Participation fee: EUR 150,- (excl. 20% VAT))
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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,- / m² (excl. 20% VAT, min. 6 m²)

SYMPOSIUM LOCATION

Salzburg Congress | Auerspergstrasse 6 | 5020 Salzburg | Austria

EVENT MODERATION

Ulrich Walter

CONTACT

The organizer of the event is the

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ASSOCIA TION

Schwingungstechnischer Verein

E-mail: info@torsional-vibration-symposium.com

Phone: +43 662 660 720

Website: torsional-vibration-symposium.com