

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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Dr. Andreas Thalhammer

Geislinger GmbH | AT

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TORSIONAL VIBRATION SYMPOSIUM

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 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
13:00	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
13:25	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

13:50	Recent Developments in Open-Source Tools for Torsional Vibration Analysis S. Laine Aalto University	Validation of Fatigue Theory for a Propulsion Shaft Subject to Torsional Vibrations G. Dahler DNV AS
14:15	Coffee Break	

	Session 3A: Powertrain Components - Elastic Couplings and Dampers I	Session 3B: Measurement and Monitoring
14:40	Torsional Vibration Dampers for Two-Stroke Marine Diesel Propulsion Powertrains – A Techno-Economic Study C. Leontopoulos M. Giaouzis, A. Thalhammer, et. al. ABS, Thenamaris Ships Management Inc., Geislinger GmbH	MEMS Gyroscope in Torsional Vibration Measurements J. Köykkä, J. Määttä, P. Sundström, et. al. Wärtsilä Finland Oy
15:05	Sustainable Solution by Reducing Idle Speed and Fuel Consumption in Crane Application with Super-Soft Rubber Coupling M. Hasan REXNORD CENTA	Early Fault Detection Applied to Turbines, Pistons Engines, and Torque Evaluation H. Saiah dataVIB Impédance
15:30	Vibration Aspects of Different Power Take-Off Units for 2-Stroke Marine Propulsion Systems R. Wilkie, D. Richter-Trummer, A. Thalhammer Geislinger GmbH	
15:55	Coffee Break	

	Session 4A: System Reliability - Case Studies II	Session 4B: Active and Passive Dampers
16:20	<p>Development of a Damage Model for the Lifetime Prediction of a Viscous Torsional Vibration Damper</p> <p>A. Leib, B. Mokdad, Y. Peterschmitt Liebherr-Components Colmar SAS</p>	<p>Active Damping of Torsional Vibrations</p> <p>U. Ubaid Lloyd's Register EMEA</p>
16:45	<p>Marine Propulsion Shafting Excessive Torsional Vibrations - Revisited</p> <p>B. Cowper, Z. Schramm LamaLo USA, LLP</p>	<p>Improved Prediction of the Nonlinear Behavior of Silicon Oil in Viscous Dampers</p> <p>M. Steidl, R. Zadoks, S. Willeke Hasse und Wrede GmbH, Independent Consultant</p>
17:10	End of Thursday's Sessions	
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
09:25	Torque Estimation for Maritime Propulsion Systems U. Hakonen Aalto University	An Adaption of an Analytical Method to Predict Torsional Damping and Added Water for Marine Propellers H. Nørgaard MAN Energy Solutions
09:50	Impact of Propeller Retrofits in the Torsional Vibrations of Marine Propulsion Shafting – Case Studies K. Lal Mecklenburger Metallguss GmbH	Visco-Elastic Finite Element Approach on Thermo-Mechanical Coupled Simulation and Validation in Rubber Coupling M. Hasan, R. Zadoks REXNORD CENTA, Independent Consultant
10:15	Unveiling the Truth Behind First Order Dynamics and Alignment M. Zeid BERG Propulsion	System-Modelling Marine Drivetrains: A Glimpse at the MBSE Approach at IME Aachen GmbH B. Juretzki, M. Körber, T. Möller, et. al. IME Aachen GmbH
10:40	Coffee Break	

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

	Session 7A: Powertrain Components - Elastic Couplings and Dampers II	Session 7B: Rules and Regulations
13:45	<p>Temperature Effects on the Dynamic Characteristics of Rubber-Based Elastomer Couplings</p> <p>S. Bahr, G. Jacobs, G. Höpfner, S. Akbulut</p> <p>Institute for Machine Elements and Systems Engineering, RWTH Aachen</p>	<p>CIMAC Working Group 4, Crankshaft Rules – Current Activities</p> <p>P. Böhm, T. Frondelius, J. Dowell, D. Bell, et. al.</p> <p>MAN Energy Solutions SE, Wärtsilä, Wabtec Corporation, Ricardo UK Ltd, Kobe Steel Ltd.</p>
14:10	<p>Reciprocating Compressor Coupling Revamp: Advantages of Highly Flexible Elastomeric Couplings and Disadvantages of Steel Disc Couplings for Torsional Vibration Aspects</p> <p>K. Kloos</p> <p>Neuman & Esser GmbH & Co. KG</p>	
14:35	<p>Skip Firing as Challenge on Modern Powertrain Configuration</p> <p>H.G. Flesch, M. Mehrgou, C. Mühlberger, et. al.</p> <p>AVL, Geislinger GmbH</p>	

	Session 8: Closing Session
15:00	TVA Modelling Beyond the Deterministic Theory A. Thalhammer, K. Bergmann Geislinger GmbH
15:25	Closing
15:35	Farewell Coffee
16:00	End

Saturday: May 17, 2025

08:45	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

VIBRA
ASSOCIATION

Schwingungstechnischer Verein

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

Phone: +43 662 660 720

Website: torsional-vibration-symposium.com