

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

Prof. Georg Wachtmeister

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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
13:10	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	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
14:25	Coffee Break	

	Session 3A: Powertrain Components - Elastic Couplings and Dampers I	Session 3B: Measurement and Monitoring
14:50		MEMS Gyroscope in Torsional Vibration Measurements J. Köykkä, J. Määttä, P. Sundström, et. al. Wärtsilä Finland Oy
15:15	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
15:40	Vibration Aspects of Different Power Take-Off Units for 2-Stroke Marine Propulsion Systems R. Wilkie, D. Richter-Trummer, A. Thalhammer Geislinger GmbH	
16:05	Coffee Break	

	Session 4A: System Reliability - Case Studies II	Session 4B: Active and Passive Dampers
16:30	<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>
16:55	<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 Silicone Oil in Viscous Dampers</p> <p>M. Steidl, R. Zadoks, S. Willeke Hasse und Wrede GmbH, Independent Consultant</p>
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
09:25	Torque Estimation for Maritime Propulsion Systems U. Hakonen Aalto University	
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

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