Inria

iomac

11th International Operational Modal Analysis Conference

May 20 - 23, 2025 | Rennes, France


20
years
iomac

WELCOME TO IOMAC 2025!

We are delighted to welcome you to the 11th International Operational Modal Analysis Conference (IOMAC 2025), from May 20th to 23rd in Rennes, at its first-ever edition in France.

This year also marks the 20th anniversary of IOMAC. Over the past two decades, OMA has evolved into a mature and dynamic field, with wide-ranging of theoretical, methodological, and applied developments. At IOMAC 2025, we proudly build on this legacy and venture forward to explore new avenues of research and applications. The theme **"OMA and beyond"** *reflects the evolving role of OMA as more than just a tool for estimating modal parameters. Being essential for the analysis of systems under operational conditions across civil, mechanical, aeronautical, and geotechnical engineering, OMA progresses towards the integration of its philosophy with emerging methods for digital twins, hybrid modeling, physics-informed learning, and more – considering the growing complexity of modern engineering systems.*

The conference program offers an opportunity to revisit the fundamentals in our pre-conference courses, and get insight into the OMA of tomorrow through technical presentations from academics and practitioners around the globe. The three-day program features keynote lectures by leading experts, around 100 technical presentations – including special sessions that reach beyond traditional OMA boundaries –, an industry exhibition, and engaging social events to connect and inspire the community.

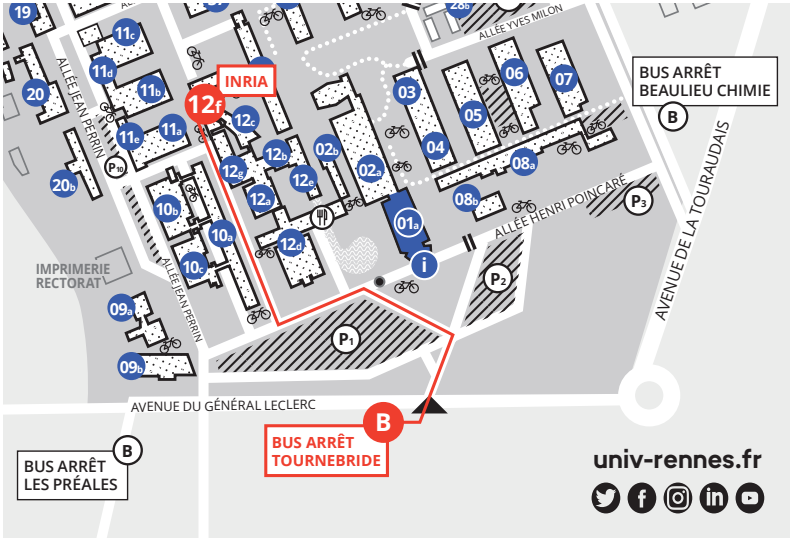
We wish you a rewarding and enjoyable conference!

Warm regards,
Dr. Michael Döhler & the Organizing Committee

VENUE INFORMATION

IOMAC 2025 takes place at the Inria Center at University of Rennes which is located on the University Campus de Beaulieu and can be easily reached by public transportation. A single fare costs 1.70 € and is valid for one hour from the time of first validation.
You can simply tap your contactless credit card on the terminal inside the bus or at the metro entrance to validate your ticket.

From city center: at the “République” station, take line C4 toward Saint-Sulpice or line C6 to Cesson-Sévigné, and get off at the “Tournebride” stop. Then it’s a short walk to Inria on the campus. The bus ride takes around 10 minutes.



VENUE INFORMATION

From the venue, you can access directly the train station and the airport:

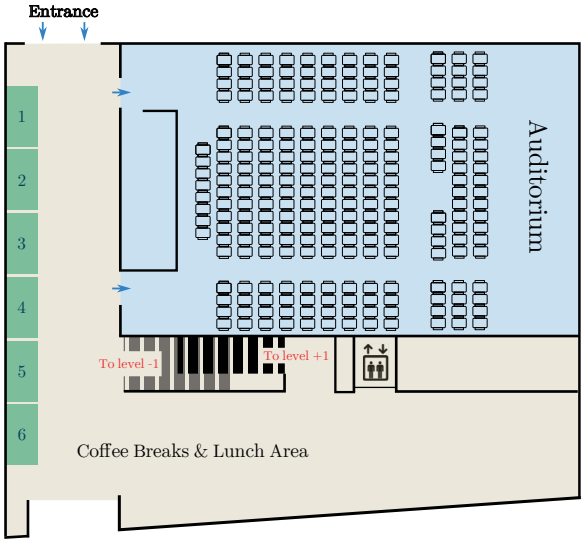
- **To train station:** Enjoy a 10-minute walk to the Metro line B station “Beaulieu Université” on the campus. Board the metro heading towards “Saint-Jacques – Gaîté”, and get off at “Gares” after a 10-minute ride.

- **To airport:** Take the C6 bus at the “Tournebride” stop in direction of “Aéroport – Saint-Jacques-de-la-Lande”. The C6 line directly serves Rennes Airport, with the stop located just in front of the terminal building. The journey takes about 30–40 minutes, and runs every 10–15 minutes.

Registration desk and badge pickup: You can obtain your badge and conference kit at the welcome reception on Tuesday, May 20, 18:30 – 20:30, at Le Piccadilly, Place de la Mairie, in the city center of Rennes. At the venue, you can pick up your badge at the registration desk next to the reception of Inria during the conference opening hours (see program).
Please remember to **wear your conference badge at all times**. It not only identifies you as a participant and grants access to the venue, but also gives you access to the social program (welcome reception, wine & cheese tasting, Mont-Saint-Michel tour with gala dinner).

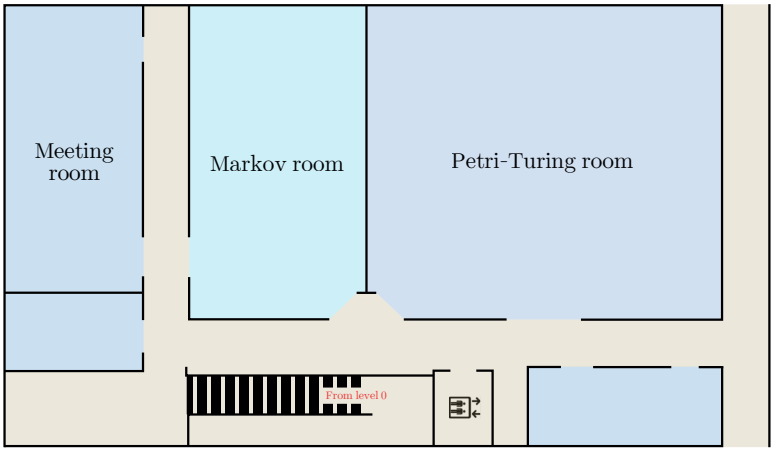
Conference rooms: The plenary sessions will take place in the auditorium (ground floor), and the parallel sessions will take place in the auditorium, as well as in the rooms Markov and Petri-Turing (upper floor). For those who may need a quiet place to read, catch up on work, or prepare for their presentation, a dedicated working space is available in the meeting room on the first floor.

Ground floor



GENERAL INFORMATION

First floor



Coffee breaks and lunches will be served in the exhibition area in the ground floor, where standing tables will be available. For more space and seating, the Petri-Turing room will also be open during lunch breaks. Please make your way to the lunch area promptly at the start of the break so we can maintain the schedule.

Wi-Fi access is available throughout the venue. If you have institutional access, we recommend connecting via eduroam. Otherwise, a local Wi-Fi code is included in the pocket of your conference badge.

Luggage storage: Should you require a place to store your luggage during the day, please speak with the staff at the registration desk, who will be happy to assist.
Please note that luggage remains under the responsibility of its owner.

Presentation guidelines

Each technical presentation is allocated a 20-minute time slot, which includes 15 minutes for the presentation and 5 minutes for Q&A and transition to the next speaker. Timing will be strictly enforced to ensure a smooth flow between parallel sessions.

Speakers must arrive in the session room at least 15 minutes before the start of their session to upload their presentation (PowerPoint or PDF format with all fonts and media embedded).
Please rename the file as *NumberWithinSession_Surname* (e.g., 3_Andersen.pdf) before copying it to the room's laptop. The conference computers are equipped with Windows 11. It is not possible to use own devices.

Members of the conference staff will be available in each room to provide technical assistance and can be easily identified by their yellow badge and lanyard.

PROGRAM AT A GLANCE

Tuesday, May 20th 2025		
08:00 – 17:00	Pre-conference courses (upon registration)	Petri-Turing, Markov
18:30 – 20:30	Welcome reception	Le Piccadilly (Center of Rennes)

Wednesday, May 21st 2025		
08:00 – 08:30	Registration & welcome coffee	Main lobby
08:30 – 09:00	Opening ceremony	Auditorium
09:00 – 10:00	Keynote lecture	Auditorium
10:00 – 10:20	Coffee break	Main lobby
10:20 – 12:20	Parallel sessions	Auditorium, Petri-Turing, Markov
12:20 – 14:00	Lunch break	Main lobby, Petri-Turing
14:00 – 15:40	Parallel sessions	Auditorium, Petri-Turing, Markov
15:40 – 16:00	Coffee break	Main lobby
16:00 – 17:20	Parallel sessions	Auditorium, Petri-Turing, Markov
17:20 – 18:00	PhD pitch competition	Auditorium
19:00 – 21:00	Wine & cheese tasting	L'Aventure, Prison Saint-Michel (Center of Rennes)

PROGRAM AT A GLANCE

Thursday, May 22nd 2025		
08:00 – 08:30	Registration & welcome coffee	Main lobby
08:30 – 09:30	Lecture of Honor	Auditorium
09:30 – 10:30	Parallel sessions	Auditorium, Petri-Turing, Markov
10:30 – 10:50	Coffee break	Main lobby
10:50 – 12:50	Parallel sessions	Auditorium, Petri-Turing, Markov
12:50 – 14:00	Lunch break	Main lobby, Petri-Turing
14:00 – 23:30	Mont-Saint-Michel tour with gala dinner	Departure by bus

Friday, May 23rd 2025		
08:30 – 09:00	Registration & welcome coffee	Main lobby
09:00 – 10:20	Industrial keynote lectures	Auditorium
10:20 – 10:40	Coffee break	Main lobby
10:40 – 11:40	Parallel sessions	Auditorium, Petri-Turing, Markov
11:40 – 12:40	Industrial plenary session	Auditorium
12:45 – 14:00	Lunch break	Main lobby, Petri-Turing
14:00 – 15:20	Parallel sessions	Auditorium, Petri-Turing, Markov
15:20 – 15:50	Closing ceremony	Auditorium
16:00 – 18:00	Farewell coffee & open discussion	Main lobby

DETAILED PROGRAM

Tuesday May 20, 2025		
	Pre-conference courses (upon registration)	
	Petri-Turing	**Markov**
08:00	**C. Ventura, N.-J. Jacobsen:** Operational Modal Analysis: Background, Theory & Practice	**S. Greś, A. Mendler:** Advanced Methods for Vibration Analysis
18:30	Welcome reception at Le Piccadilly (Place de la Mairie, center of Rennes)	

Wednesday May 21, 2025			
08:00	Registration & welcome coffee		
	Auditorium		
08:30	**Opening ceremony**		
09:00	**Keynote lecture** **E. Chatzi:** Structural dynamics as a principal pillar to AI-enhanced digital twinning		
10:00	**Coffee Break**		
	Auditorium	**Petri-Turing**	**Markov**
	S9 - Physics-enhanced learning for structural health monitoring tasks Chairs: K. Vlachas, M. Haywood-Alexander	**S4 – Dynamic identification and long-term modal-based monitoring of bridges (1)** Chairs: I. Rosati, P. Borlenghi	**Damage detection** Chairs: S. Fassois, L. Avendaño-Valencia
10:20	**M. Jensen**: Application of pseudo-anomaly generation in unsupervised fault diagnosis of wind turbine bearings under changing operating conditions	**J. Kullaa:** A design map for a structural health monitoring system based on redundancy of autocovariance functions	**D. Dessi:** Use of ensemble learning in damage identification based on curvature analysis

10:40	**V. Panagiotopoulou:** Damage Identification in Rotary Shafts via Vibration Monitoring and Physics-Informed Neural Networks	**L. Ierimonti:** A multi-scenario approach for structural health monitoring of existing bridges	**J. Pacheco-Chérrez:** Operational Strain Modal Analysis and Wavelet Analysis for Damage Detection in Glass Beams
11:00	**Z. Chao Ong:** Feasibility study of utilising modal-based features for finite element model-informed artificial neural network-based damage identification	**F. Hille:** System identification and model calibration of a steel road bridge	**M. Aenlle:** Proportional flexibility matrices using modal parameters estimated with operational modal analysis
11:20	**N. Mahar:** Physics-aware neural network integrated with stochastic subspace identification for quantification of physical changes	**A. Avramova:** Long-term operational modal analysis of a steel-concrete composite bridge	**A. Bendezú:** Structural damage detection on a full scale masonry cross vault subjected to quasi-static cyclic loading tests
11:40	**A. Venturi:** Robustness vs. effectiveness of transfer learning in damage identification depending on feature selection	**M. Civera:** Experimental Damping Identification of a Bridge Case Study in Norway under Still Air Conditions	**J. Ragnitz:** Influence of Optimised Sensor Placements on Multi-Objective Model Updating for Damage Localisation
12:00	**B. Yamamoto:** Stochastic modal analysis of pipe wall thinning structure based on Generative Adversarial Net (GAN) associated with interfacial roughness model	**L. Severa:** Wavelet-Based Damage Sensitive Features Extraction for Structural Health Monitoring of Bridges	**S. Bogoevska:** Robust data-driven health monitoring of full-scale concrete dam structures via stochastic ML schemes
12:20	**Lunch Break**		

DETAILED PROGRAM

	Auditorium	Petri-Turing	Markov
	S7 - Bayesian approaches for engineering dynamics Chairs: T. Rogers, A. Hughes	**S6 - OMA for digital twins** Chairs: R. Sarlo, A. Mendler	**S5 - Optical methods for structural identification and monitoring (1)** Chairs: J. Slavič, V. Baltazart
14:00	**M. Champneys:** A Gibbs sampler for removing environmental effects in structural health monitoring features	**A. Jara-Cisterna:** Application of Digital Twins in Structural Health Monitoring: A Case Study of a CLT Building in a Seismic Zone	**D. Gorjup:** Frequency-domain Triangulation for Single-Camera Sound Radiation Measurement
14:20	**N. Aswal:** Improving Bayesian filters for structural health monitoring applications with subspace-based noise covariance estimates	**S. Bertero:** Cable tensioning during retrofitting of a suspension bridge: a case study on the use of updated nonlinear models	**K. Čufar:** Mode-shape magnification in high-speed camera measurements
14:40	**B. O'Connell:** Exploring physically meaningful prior distributions for OMA	**R. Sarlo:** Combined Geometrical and Modal Model Calibration via Reality Capture and Geometrical Modal Analysis: Application to a Steel Building	**A. Zona:** Multi-target computer-vision dynamic monitoring of displacements in a full-scale building
15:00	**P. Zhang:** Probabilistic Super-Resolution for High-Fidelity Physical System Simulations with Uncertainty Quantification	**D. Tcherniak:** Efficient system identification, model updating, and virtual sensing in the Digital-Twin-as-a-Service software platform	**Y. Wang:** Vibration analysis of a car door using randomly sampled stereo camera measurements with a large stereo angle
15:20	**F. Mariani:** Probabilistic Damage Detection in a Post-Tensioned Concrete Bridge Using Bayesian Neural Networks for Continuous Model Updating: a Numerical Study	**T. Núñez:** Integrated structural condition assessment of an ancient Mayan Temple	**D. Mastrodicasa:** Advancements in structural dynamics characterization: the role of Video Motion Magnification in full-field Operational Deflection Shape characterization
15:40	**Coffee Break**		

DETAILED PROGRAM

	Auditorium	Petri-Turing	Markov
	Civil structures applications Chairs: C. Ventura, B. O'Connell	**S1 - Diagnosis of rotating machinery** Chairs: M. Amer, D. Tcherniak	**S3 - Advances in modal analysis for aeronautical and space systems** Chairs: M. Civera, G. Dessena
16:00	**M. Dupuis:** Evaluation of a low-cost instrument for ambient vibration testing of concrete gravity dams	**N. Dreher:** Harmonic removal for Automated Operational Modal Analysis of coupled rotor foundation system influenced by magnetic bearings and gas seals	**D. Antonini:** Dynamic Characterization of a Flexible Wing Model Using Stochastic Modal Appropriation for Nonlinear Aeroelastic Analysis
16:20	**P. Fernández:** Vibration and Modal Analysis of the Roman Wall of Lugo	**N. Delette:** Model Updating of Rotating Wind Turbines Using Operational Modal Analysis and Floquet Mode Decomposition	**G. Dessena:** Modal parameter extraction via the Loewner Framework: Current progress and future directions
16:40	**D. Siegert:** Vibration based early scour detection for multi-pier bridges	**V. Irissappane:** Assessment of harmonic suppression methods within OMA of an axial piston pump under constant speed	**M. Tang:** Application of gyroscopes for stability monitoring in flutter tests
17:00		**D. M. Bourdalos:** Incipient gear fault detection under varying operating speed and load via Multiple Model vibration time series methods	**M. Civera:** Fast and relaxed vector fitting: an application to a fighter jet aircraft
	Auditorium		
17:20	**PhD Pitch Competition**		
19:00	Wine & cheese tasting, L'Aventure, Prison Saint-Michel (Center of Rennes)		

DETAILED PROGRAM

Thursday May 22, 2025			
08:00	Registration & welcome coffee		
	Auditorium		
08:30	**Lecture of Honor** **S. Fassois:** Time series based robust damage and fault diagnosis for structures and systems under uncertainty		
	Auditorium	**Petri-Turing**	**Markov**
	OMA software Chairs: M. Aenlle, A. Venturi	**S2 - Monitoring for railway infrastructure: technologies and methods** Chairs: C. Stoura, S. Greś	**OMA for FEM-based assessment (1)** Chairs: J. Kullaa, N. García-Fernández
9:30	**A. Shamsaddinlou:** A Comparative Study of OMA Techniques Using a Novel Python Library for Structural Health Monitoring	**J. Ávila-Rodríguez:** Ambient vibration testing results to estimate the predominant periods of soil motion and the shear wave velocity profile in an anthropic soil zone associated with the Mexico City METRO	**G. Candoni:** Applying Operational Modal Analysis to rammed earth buildings for seismic assessment: an exploratory study
9:50	**D. Pasca:** Easy automated OMA with open source software	**L. Auersch:** Modal analysis of road and rail bridges for damage detection and resonance prediction	**B. Bhowmik:** Reviving the I-40 Structural Deficit Paradigm: An Online Computational Behavioural Study Under Imposed Traffic Loads
10:10	**S. Quarchioni:** New software for dynamic identification and optimal sensor placement of civil structures and infrastructures	**C. Salvi:** Suitability of MEMS accelerometers for continuous monitoring of railway bridges - a case study	**F. López-Almansa:** OMA of a school building damaged by the Illapel earthquake (Chile 2015)
10:30	**Coffee Break**		

	Auditorium	Petri-Turing	Markov
	S10 - Vibration-based assessment and monitoring for wind energy structures Chairs: S. Vettori, B. Peeters	**S8 - Modeling and computational methods for physical model-based identification (1)** Chairs: A. Mélot, V. Mahé	**Uncertainty quantification** Chairs: L. Mevel, J. Cara
10:50	**X. Iriarte:** Analysis of the aerodynamic damping in the modal parameter estimation of wind turbines	**V. Mouton:** An efficient neural network-based surrogate model for predicting static gear contact conditions	**J. Cara:** About the uncertainty of modal parameters estimated in Operational Modal Analysis
11:10	**S. Vettori:** Finite Element Model Updating of a Small-Scale Wind Turbine Blade Using Strain-Based Pull-and-Release Test Data	**S. Greś:** Detection of Stall Induced Vibrations in Standstill Wind Turbines	**L. Neumann:** Confidence Intervals for Conditional Covariances of Natural Frequencies
11:30	**M. Amer:** First steps towards the development of structural health monitoring approaches for wind turbines in seismic-prone areas	**V. Mahé:** Wave-based modelling of arbitrarily complex periodic waveguides with nonlinear boundaries	**S. Marwitz:** Cross-Validation in Stochastic Subspace Identification
11:50	**K. Gnebner:** Identification and Long-Term Tracking of Modal Parameters of a 150m Wind Measurement Mast Using Ambient Excitation	**L. Salles:** Computational methods for whirl flutter analysis	**J. Gundlach:** Uncertainty Quantification of the Modal Rotation Shape Sensing Method for Geometrically Non-Linear Deformation
12:10	**G. Nico:** Measuring displacements and vibration frequencies of wind towers by means of a ground-based radar interferometer	**S. Anderson:** Design optimisation of lightweight aerospace structures for vibration fatigue	**C. Van Zijl:** Quantification of errors in frequency-domain inverse force estimation due to measurement and model noise
12:30	**Y. Govers:** Reliable damping ratio estimates from a 50m+ wind turbine rotor blade as a guide for prototype testing in the low frequency regime		**E. Chaves:** Enhancing Dynamic Identification in Heritage Buildings: A Comparative Study of Optimal Sensor Placement Metrics
12:50	**Lunch Break**		
14:00	Mont-Saint-Michel tour with gala dinner Departure by bus from the conference venue; return to Rennes scheduled at 23:30		

DETAILED PROGRAM

Friday May 23, 2025			
08:30	Registration & welcome coffee		
	Auditorium		
09:00	**Industrial Keynote** **F. Batlle:** Dynamic computational model and health monitoring of gas turbines for helicopters		
09:40	**Industrial Keynote** **F. Ayme:** Operational Modal Analysis in aeronautical industry - some examples at Airbus		
10:20	**Coffee Break**		
	Auditorium	**Petri-Turing**	**Markov**
	OMA for FEM-based assessment (2) Chairs: P. Fernández, C. Beering	**S5 - Optical methods for structural identification and monitoring (2)** Chairs: D. Anastasopoulos, D. Gorjup	**S8 - Modeling and computational methods for physical model-based identification (2) / S11 - Bayesian filters** Chairs: C. Droz, V. Mouton
10:40	**N. García-Fernández:** The ROTMAC concept: an experimental application	**M. Kabbara:** Post-processing of fiber optic sensors data with consideration of strain transfer for distributed strain measurements	**S. Takata:** 1D-CAE model building and simulation based on modal parameter identification of Electrical-Mechanical coupling system
11:00	**E. Chaves:** Dynamic Identification and Finite Element Model calibration of the Santa Ana church in Seville	**D. Anastasopoulos:** Optimal sensor placement of FBGs based on the effective independence method for OMA of a Vierendeel truss bridge	**A. Gavilán-Rojas:** Subspace-based wavenumber identification in periodic waveguides adapted to full-field vibration measurements
11:20	**L. Vignali:** Long-term dynamic monitoring of the Leaning Tower of Pisa	**N. Aubert:** Modal shape reconstruction with distributed fiber optic strain sensing	**S. OA:** Compensating Low Instrumentation for Mode Shape Estimation in Bayesian Filtering with Time-Delayed Data Embedding
	Auditorium **Industrial plenary session**		
11:40	**R. Mesar, V. Coric (Dewesoft):** Ultimate SHM technologies and real case study of Autio Bridge		
11:50	**P. Andersen (SVS):** Using ARTeMIS Modal for vibration-based structural health monitoring		
12:00	**B. Peeters (Siemens):** Satellite acoustic testing: OMA as part of an engineering workflow		

12:10	**E. Dascotte (Dynamic Design Solutions):** Virtual OMA for test planning		
12:20	**C. Aguilera (Geocomp):** OMA as the first step towards digital twin design: case study on a floating offshore wind turbine		
12:30	**E. Margallo (Ommatidia Lidar):** Massively parallel laser radar for large-scale non-contact vibration analysis		
12:40	**Lunch Break**		
	Auditorium	**Petri-Turing**	**Markov**
	Advanced signal processing methods Chairs: G. Coppotelli, M. Champneys	**S4 - Dynamic identification and long-term modal-based monitoring of bridges (2)** Chairs: I. Rosati, P. Borlenghi	**S11 - Bayesian filters for identification and infrastructure monitoring** Chairs: S. Greś, N. Aswal
14:00	**G. Martin:** Analysis of brake squeal using the Harmonic Balance Vector (HBV) signal model: dependence of squeal frequency, fundamental and harmonic shapes on operational parameters	**C. Beering:** Examining environmental influences on natural frequencies with the help of local distance correlation	**S. OA:** A novel lagged estimation framework for sparsely observed systems supplemented with virtual measurements sampled in delayed time
14:20	**M. Brøns:** Using Scanning Laser Doppler Vibrometry for Experimental Frequency-based Substructuring	**I. Rosati:** Finite element model refinement of a reinforced concrete highway arch bridge based on Operational Modal Analysis	**L. Avendaño-Valencia:** A comparison of subspace-based and maximum likelihood noise covariance estimation within Kalman filtering for virtual sensing applications
14:40	**L. Campello:** Definition of a single axis excitation set-up for a multi-axial random fatigue assessments	**P. Borlenghi:** Operational modal analysis of two similar multi-span bridges	**Q. Zhang:** Subspace System Identification with Unknown Disturbance Rejection
15:00	**H. Huang:** A Deep Learning Model for Cross-Building Seismic Response Sequence Reconstruction	**B. Bhowmik:** Addressing Mode-Mixing Challenges in Structural Health Monitoring: Numerical and experimental validation	**M. Thing:** Identifiability Analysis of the Input Excitation of two Mechanical Systems using the Lie-derivative and the Empirical Gramian Method
15:20	**Auditorium**		
	Closing Ceremony		
15:50	Farewell coffee & Open discussion		
18:00	Closing		

PLENARY SPEAKERS

Eleni Chatzi, *ETH Zürich, Switzerland*

Keynote: *"Structural dynamics as a principal pillar to AI-enhanced digital twinning"*

Auditorium, Wednesday May 21st, 09:00 – 10:00

Eleni Chatzi is Full Professor and Chair of Structural Mechanics and Monitoring at ETH Zürich. Her research focuses on Structural Health Monitoring, digital twins, and data-driven decision-making for infrastructure. She is editor for several leading journals in dynamics and SHM, and has led the ERC-funded WINDMIL project on smart monitoring of wind turbines. She serves as President of the European Academy of Wind Energy (EAWE).

Her work has been recognized with multiple awards, including the 2020 ASCE Walter L. Huber Research Prize, the 2020 EASD Junior Research Prize, the JM Ko Award, and the 2024 SHM Person of the Year.

Spilios Fassois, *University of Patras, Greece*

Lecture of Honor: *"Time series based robust damage and fault diagnosis for structures and systems under uncertainty"*

Auditorium, Thursday May 22nd, 08:30 – 09:30

Spilios Fassois is Professor and Director of the SMSA Laboratory at the University of Patras, Greece. His research focuses on stochastic and data-driven methods for mechanical and aeronautical systems, with applications in SHM and machine learning. He has published over 320 articles and received several awards, including the 2023 Evangelos Papanoutsos Award from the University of Patras and the 1990 Excellence in Teaching Award from the University of Michigan.

He is Editor-in-Chief of Mechanical Systems and Signal Processing, serves on editorial boards of several major journals, and is active in international scientific committees and conferences.

PLENARY SPEAKERS

Frédéric Batlle, *Safran Helicopter Engines, France*

Industrial Keynote: *"Dynamic computational model and health monitoring of gas turbines for helicopters"*

Auditorium, Friday May 23rd, 09:00 – 09:40

Frédéric Batlle is a Senior Expert at Safran Group and Technical Auditor at Safran Helicopter Engines, specializing in mechanics and vibrations. Since 1996, he has focused on turbomachinery vibrations, rotor dynamics, and structural behavior across engine development, certification, production, and fleet support.

He represents Safran's knowledge in technical exchanges with manufacturers and certification authorities, conducts internal and group-wide audits, and trains engineers at Safran University in Structural Dynamics and mechanical integration.

Fabien Ayme, *Airbus, France*

Industrial Keynote: *"Operational Modal Analysis in aeronautical industry – some examples at Airbus"*

Auditorium, Friday May 23rd, 09:40 – 10:20

Fabien Ayme has been working in the Airbus Commercial division's Vibration Flight Test Department since 2013.

He holds a Master degree in Mechanical Engineering and a PhD in Vibro-acoustics from École centrale de Lyon, France. Since 2016, his work has focused on aero-elastic testing, covering GVT, flight domain expansion, and flutter tests, following earlier work on various vibro-acoustic topics.

He is currently advancing toward expert status in aero-elastic testing.

SPECIAL SESSIONS

Several special sessions have been organized; special thanks go to their organizers:

S1 – Diagnosis of rotating machinery
Mona Amer (The University of British Columbia, Canada) · Dmitri Tcherniak (HBK – Hottinger Brüel & Kjær, Denmark)

S2 – Monitoring for railway infrastructure: technologies and methods
Charikleia Stoura, Eleni Chatzi, Vasilis Dertimanis (ETH Zürich, Switzerland) Paolo Chiariotti (Politecnico di Milano, Italy)

S3 – Advances in modal analysis for aeronautical and space systems
Marco Civera (Politecnico di Torino, Italy) · Gabriele Dessena (Universidad Carlos III de Madrid, Spain)

S4 – Dynamic identification and long-term modal-based monitoring of bridges
Carlo Rainieri, Ilenia Rosati (CNR, Naples, Italy) · Carmelo Gentile, Paolo Borlenghi (Politecnico di Milano, Italy)

S5 – Optical methods for structural identification and monitoring
Dimitrios Anastasopoulos, Edwin Reynders (KU Leuven, Belgium) · Vincent Baltazart (Université Gustave Eiffel, France) · Janko Slavič (University of Ljubljana, Slovenia)

S6 – OMA for digital twins
Rodrigo Sarlo (Virginia Tech, USA) · Alexander Mendler (Technical University of Munich, Germany)

S7 – Bayesian approaches for engineering dynamics
Timothy Rogers, Aidan Hughes (University of Sheffield, UK) · Lawrence Bull (University of Glasgow, UK)

S8 – Modeling and computational methods for physical model-based identification
Adrien Mélot, Christophe Droz (Inria, France)

S9 – Physics-enhanced learning for structural health monitoring tasks
Konstantinos Vlachas, Marcus Haywood-Alexander (ETH Zurich, Switzerland) Konstantinos Agathos (University of Exeter, UK)

S10 – Vibration-based assessment and monitoring for wind energy structures
Silvia Vettori, Emilio Di Lorenzo (Siemens Digital Industries Software, Belgium)

S11 – Bayesian filters for identification and infrastructure monitoring
Szymon Greś (Aalborg University, Denmark) · Konstantinos Tatsis (Swiss Data Science Center, Zurich, Switzerland) · Subhamoy Sen (IIT Mandi, India) Laurent Mevel (Inria, France)

SOCIAL EVENTS

1 Welcome Reception – Tuesday, May 20th
Le Piccadilly – Place de la Mairie – Rennes

Join us for an informal Welcome Reception at Le Piccadilly Rennes, a vibrant and stylish venue in the heart of the city.
This cocktail evening will feature a variety of finger foods and drinks, providing the perfect opportunity to reconnect with colleagues and meet new ones in a relaxed atmosphere.

The reception will begin at 18:30 and continue until 20:30. Attendees will be able to register to the conference during the evening. The venue is located next to the Opéra de Rennes (Place de la Mairie), just a short walk from République station.

2 Wine & Cheese Tasting – Wednesday, May 21st
L'Aventure / Prison St-Michel – 7 allée Rallier du Baty – Rennes

Enjoy an evening of French flavours at L'Aventure, a historic bar in the heart of Rennes.
This Wine & Cheese Tasting event offers a chance to discover regional and national specialties while exchanging with colleagues in a convivial setting.

The tasting will take place from 19:00 to 21:00, and will be accompanied by light finger food. Feel free to stay at L'Aventure after the tasting, and enjoy the evening at your own pace. L'Aventure is centrally located within La Prison St-Michel. Please remember to bring your conference badge for entry.

SOCIAL EVENTS

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Visit of Mont-Saint-Michel & Gala Dinner – Thursday, May 22nd

On Thursday afternoon, join us for a visit to the iconic Mont-Saint-Michel, a UNESCO World Heritage Site and one of France's most admired landmarks. The excursion includes round-trip transportation from Rennes, a guided visit of the abbey, and free time to explore the village. Departure is scheduled at 14:00 from the conference venue.

Participants will be able to leave their belongings in the bus during the event. Following the excursion to Mont-Saint-Michel, we will continue directly to the Château de Bonnefontaine for the conference Gala Dinner. Surrounded by historic charm and peaceful nature, the Château provides a beautiful setting for an evening of fine dining and celebration with colleagues.

The return to Rennes is scheduled for 23:30.

Dress code: We recommend wearing comfortable shoes and bringing sun protection (e.g., hat, sunscreen) for the Mont Saint Michel visit.
To transition smoothly to the gala dinner afterward, consider a smart-casual outfit for the day that balances comfort and elegance, ensuring you feel at ease in both settings.

AWARDS

We will assign the following awards to distinguished members of the IOMAC community.

The **IOMAC Leadership Award** will be assigned by the IOMAC Association and its Chair to a distinguished researcher for seminal contributions in the field of OMA.

Furthermore, awards will be given by IOMAC 2025 for best papers by young researchers and well-established scientists. A novelty for IOMAC 2025 is the 3-minute PhD Pitch contest, with an award for the best pitch.
These awards are generously sponsored by Dewesoft with 500 € each:

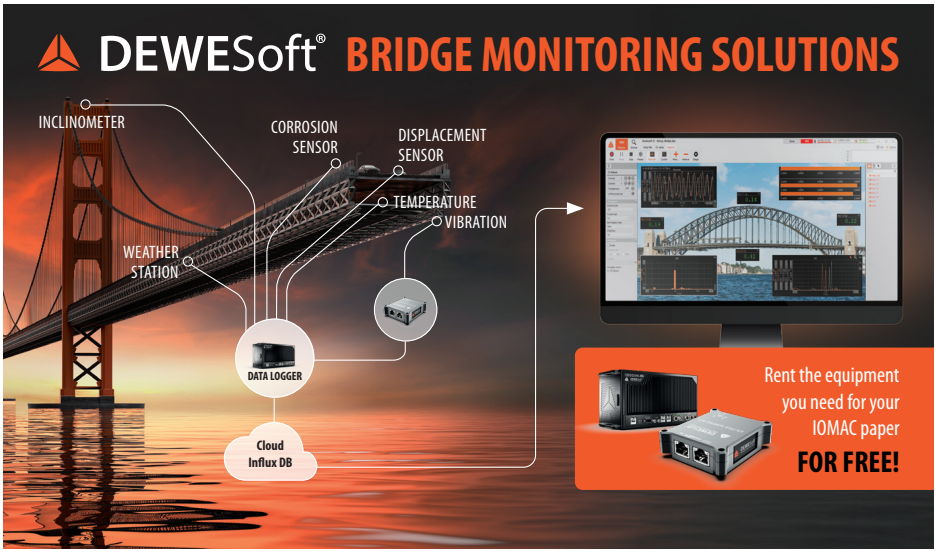
The **Best Paper Award** will be granted to the author(s) presenting a paper with the most significant impact on the OMA community, selected based on scientific novelty, relevance for practitioners, and clarity of the paper.

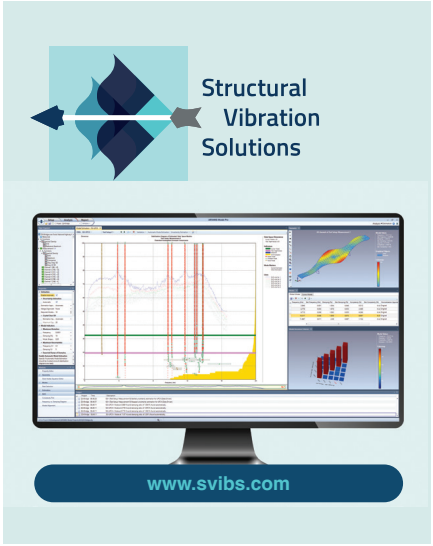
The **Best Paper Award for Young Researchers** follows the same criteria and will be granted to the best paper with a young researcher as the main author. A young researcher is defined as a Ph.D. candidate or a graduate who received their Ph.D. in 2022 or later. The paper must be presented by the young researcher at the conference.

The **Best PhD Pitch Award** will be awarded to the winner of IOMAC's 3-Minute Pitch contest, where Ph.D. candidates summarize their research idea or project within a three-minute presentation using a single static slide. Judging criteria are timing, comprehension and content, and engagement and communication.

The recipients of the awards will be officially announced at the IOMAC Conference during the gala dinner on May 22nd, 2025.

EXHIBITORS & SPONSORS





Structural Vibration Solutions A/S has been providing software solutions for Operational Modal Analysis for the last 25 years. On March 1st, 1999, Structural Vibration Solutions was founded as a spin-off from Aalborg University in Denmark.

Our first software release, ARTeMIS Extractor, was made in year 2000 and included the two patented Frequency Domain Decomposition methods FDD and EFDD as well as three versions of the Stochastic Subspace Identification (SSI) methods.

ARTeMIS Extractor has been succeeded by the more powerful ARTeMIS Modal that has a new look and feel. However, the philosophy is the same as it was back when we started. The user should have different methods available for analysis of the measurements to enable a validation of the modal results.

Today, our software is used by more than 1000 users. The users are e.g., mechanical engineers performing modal analysis of operating machinery and components, and civil engineers for ambient vibration testing and analysis of large structures like bridges and buildings.

EXHIBITORS & SPONSORS

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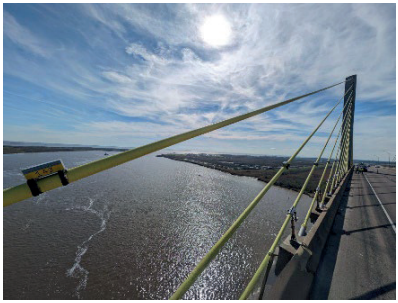

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ORGANIZING COMMITTEE

IOMAC 2025 is organized by Inria within the I4S research team at the Inria centre at Rennes University.

Local Organizing Committee

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The organizers gratefully acknowledge the generous local support and sponsorship:

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IOMAC 2025

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