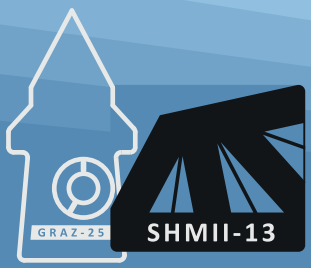
PROGRAM

Sept. 01-05. 25
Graz | Austria



13th International Conference on
Structural Health Monitoring of Intelligent Infrastructure

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Welcome

Dear colleagues,

We welcome you here in Graz and are delighted to present the conference programme for the 13th International Conference on Structural Health Monitoring of Intelligent Infrastructure (SHMII-13), organised under the auspices of the Society for Civil Structural Health Monitoring (SCSHM, formerly ISHMII). This conference serves as a dynamic forum for scientists, engineers, industry leaders, researchers, experts from the public sector, infrastructure owners and representatives of professional associations from around the world to exchange ideas and collaborate.

More than 200 papers will be presented in over 30 sessions, highlighting the latest developments in intelligent sensor technologies, sensor networks, data processing and management, diagnosis and prognosis, and life cycle assessment. The discussions cover a wide range of civil infrastructure, including bridges, dams, tunnels, retaining walls, road and rail networks, high-rise buildings and much more. We would like to invite you to actively participate in the discussion and contribute further content on the above-mentioned topics. This program booklet may not reflect the current status of the programme.We therefore kindly ask you to take a look at the digital conference programme (**https://www.conftool.com/shmii-13/**). Here you can also directly access the conference proceedings, which contain the extended abstracts and full papers presented at the conference.

We hope that the conference presentations and accompanying conference reports will serve as a lasting source of inspiration for future research, innovation and international cooperation in the field of SHM.

Werner Lienhart
Conference Chair

Markus Krüger
Conference Co-Chair

Program At A Glance

	Monday Sept 1st	Tuesday Sept 2nd	Wednesday Sept 3rd	Thursday Sept 4th	Friday Sept 5th
Morning		Opening	Keynotes II	Keynotes III	Full Day Tecnical Tours / ½ Day Technical Tours
		Keynotes I	Technical Sessions	Technical Sessions	
		Technical Sessions	Lunch	Lunch	
Afternoon	Council Meeting(restricted to SCSHM council members)	Technical Sessions	Technical Sessions	Technical Sessions	
			Guided City Tour	Closing	
Evening	Welcome Reception		Gala Dinner		

Tuesday, 02|Sept|2025

9:30am 10:00am	**Opening Ceremony** Chair: **Werner Lienhart** Chair: **Markus Krueger**	Location **HS P1**						
10:00am 11:00am	**Keynote Session I** Chair: **Markus Krueger** Chair: **Werner Lienhart**	Location **HS P1**	**Digitalizing infrastructure: Advancing structural health monitoring for smarter asset management** Sylvia Keßler **SHM for bridges – the work flow** Christian Sodeikat					
Coffee Break | Location: Exhibition Area								
11:20am 12:20pm	**Sp. Session 1: Field Applications of SHM to extend the Lifespan of Railway Bridges** Chair: **Sonja Dallinger** Chair: **Christoph M. Monsberger**	Location **HS P2**	**Sp. Session 2: Geophysical Monitoring of Infrastructure** Chair: **Michael Behm** Chair: **Kourosh Nasrollahi**	Location **HS BE01**	**Sp. Session 3: SHM in the frame of a Digital Twin in Civil Engineering** Chair: **Christian Grosse** Chair: **Frank A. Lehmann**	Location **TDK**		
	11:20am - 11:35am Monitoring of Fatigue Crack Propagation by Means of Distributed Fiber Optic Sensing Petr Dohnalík, Stefan Lachinger, Maciej Kwapisz, Alois Vorwagner		**11:20am - 11:35am** Rail track subsurface imaging from train vibrations recorded at dark fiber networks Michael Behm, Michael Brauner		**11:20am - 11:35am** Advanced structural health monitoring and predictive maintenance of the Parchi viaduct using distributed fiber optic sensors and digital twin technology Massimo Penasa, Nils Weissenbach			
	11:35am - 11:50am Updating prediction of fatigue reliability index of railway bridges using structural monitoring data and updated load histories Marian Ralbovsky, Stefan Lachinger		**11:35am - 11:50am** Monitoring of concrete infrastructure with active ultrasound coda wave interferometry Niklas Epple, Camila Sanchez Trujillo, Daniel Fontoura Barroso, Julia Hau, Ernst Niederleithinger		**11:35am - 11:50am** A digital twin based integrated sustainability and quality assurance concept for subway constructions Christian Grosse, Otto Wurzer			
	11:50am - 12:05pm Monitoring of wind induced vibration on a tied-arch railway bridge. Pablo Castillo Ruano, Cesar Martinez, Sonja Dallinger		**11:50am - 12:05pm** Finite element mesh construction for seismic analysis using drone imagery Evan Delaney, Patrick Marty, Lars Gebraad, Andrea Zunino, Andreas Fichtner		**11:50am - 12:05pm** Evolving reliability-based condition indicators for structural health monitoring into a digital twin of a cable-stayed bridge Martin Herbrand, Marc Wenner, Alex Lazoglu, Christof Ullerich, Gerhard Zehetmaier, Steffen Marx			
	12:05pm - 12:20pm Acoustic emission monitoring of fatigue cracks for railway steel bridge inspection Mikhail Prokofyev, Heribert Marihart, Gerald Lackner		**12:05pm - 12:20pm** A review of methods and challenges for monitoring of differential settlement in railway transition zones Kourosh Nasrollahi, Jens Nielsen, Jelke Dijkstra					
12:20pm 1:35pm	**Lunch Break** **Location: Exhibition Area**							
1:35pm 2:50pm	**Sp. Session 4-1: Structural Health Monitoring of Intelligent Civil Infrastructure using Fibre Optic Sensing** Chair: **Tomasz Howiacki** Chair: **Francesco Fabbricatore**	Location **HS P2**	**Sp. Session 5-1: Implementing Structural Monitoring in Daily Practice: Challenges and Solutions** Chair: **Falk Hille** Chair: **Frank A. Lehmann**	Location **HS BE01**	**Sp. Session 6: Engineering Applications of Artificial Intelligence for SHM** Chair: **Tomasz Owerko** Chair: **Karolina Tomaszkiewicz**	Location **TDK**	**Sp. Session 7-1: Computer Vision-based SHM** Chair: **Rolands Kromanis** Chair: **Maria Pina Limongelli**	Location **HS AE06**
	1:35pm - 1:50pm Advancements in Distributed Fiber-Optic Sensing: Brillouin and Rayleigh Technologies for Geotechnical and Structural Monitoring Nils Nöther, Massimo Facchini, Juan Pablo Aguilar-López		**1:35pm - 1:50pm** Monitoring of civil engineering structures – current and future use cases Joyal K. George, Kristian von Wangenheim, Felix Kaplan, Ronald Schneider, Iris Hindersmann		**1:35pm - 1:50pm** Structural damage detection, localization, quantification for high-rise buildings under earthquake excitations based on machine learning and sub-structuring approach Mohamed H. Abdelbarr, Yoshiki Ikeda, Sami Masri		**1:35pm - 1:50pm** Perspectives on vision-based vibrational structural health monitoring by drones Tommaso Panigati, Pier Francesco Giordano, Daniel Tonelli, Maria Pina Limongelli, Daniele Zonta	
	1:50pm - 2:05pm Hybrid monitoring systems: synergising distributed fibre optic sensing with spot measurements Rafał Sieńko, Tomasz Howiacki, Łukasz Bednarski, Katarzyna Zuziak		**1:50pm - 2:05pm** A structural health monitoring framework for intelligent and sustainable infrastructure: a conceptual perspective Masoud Pedram, Su Taylor, Gerard Hamill		**1:50pm - 2:05pm** „Machine learning-based data interpretation and visualization for tunnel monitoring: A case Study of changshui airport tunnel" Asif Ahmed Sourov, Yadong Xue, Yongfa Guo, Wenyun Ding, Jinjing Yang		**1:50pm - 2:05pm** Universal unsupervised image segmentation model of multi-type component and damage for vision-based autonomous UAV inspection of bridges Guangshu Yang, Chuao Zhang, Yang Xu	
	2:05pm - 2:20pm Water distribution pipeline anomaly detection using distributed acoustic sensing (DAS) Maksymilian Jasiak, Shih-Hung Chiu, Jaewon Saw, Peter Hubbard, David Katzev, Kenichi Soga		**2:05pm - 2:20pm** Best practices for data acquisition system design: Practical wisdom for engineers and practitioners Tony Simmonds, Brent Randall		**2:05pm - 2:20pm** Developing physics-informed neural networks for structural parameter identification of beams with moving loads Anmar Ibrahim Fadhil Al-Adly, Prakash Kripakaran		**2:05pm - 2:20pm** Large-Scale Structural Anomaly Detection During Seismic Events Using Optical Flow and Transfer Learning from Video Data Sifan Wang, Taisei Saida, Mayuko Nishio	
	2:20pm - 2:35pm Integrating Distributed Acoustic Sensing for Damage Detection in Old Pre-Stressed Concrete Girders: Preliminary Experimental Results Lisa Strasser, Werner Lienhart, Thomas Moser, Andrej Anžlin, Mirko Kosič, Maja Kreslin, Doron Hekič		**2:20pm - 2:35pm** From Insight to Action: Deploying SHM for a suspension bridge Heikki Lilja, Atte Mikkonen, Eero Ukkonen		**2:20pm - 2:35pm** Structural Health Monitoring of a suspended steel infrastructure: A statistical approach Nicola Molon, Filippo Casarin, Alessandro Targa, Renzo Codato, Francesca da Porto		**2:20pm - 2:35pm** Development of a Wireless Stereo Vision System for 3D Displacement Online Long-Term Monitoring of Tall Structures Miaomin Wang, Ki-Young Koo	
	2:35pm - 2:50pm Structural performance monitoring for concrete girder bridges with distributed fiber optic sensors Francesco Fabbricatore, Numa Bertola		**2:35pm - 2:50pm** Use of Monitoring for Highway Bridges on Federal Highways in Germany – Current Status and Future Development Iris Hindesmann		**2:35pm - 2:50pm** Is it possible that AI can help us detect all damage in structural assets? A discussion on the scope of applicability of DL methods for diagnosis of the construction assets's technical condition Karolina Tomaszkiewicz, Tomasz Owerko		**2:35pm - 2:50pm** Overview and Challenges of Computer Vision-Based Visual Inspection for the Assessment of Bridge Defects Rizwan Ullah Khan, Roland Kromanis	
Coffee Break | Location: Exhibition Area								

Tuesday, 02|Sept|2025

3:10pm 4:25pm	**Sp. Session 4-2: Structural Health Monitoring of Intelligent Civil Infrastructure using Fibre Optic Sensing** Chair: **Zhenkun Li** Chair: **Alessio Höttges**	Location **HS P2**	**Sp. Session 5-2: Implementing Structural Monitoring in Daily Practice: Challenges and Solutions** Chair: **Falk Hille** Chair: **Frank A. Lehmann**	Location **HS BE01**	**Sp. Session 8: Advanced Geospatial and Engineering Surveying Solutions for Infrastructure Health Monitoring** Chair: **Craig Matthew Hancock** Chair: **Panagiotis Psimoulis**	Location **TDK**	**Sp. Session 7-2: Computer Vision-based SHM** Chair: **Rolands Kromanis** Chair: **Maria Pina Limongelli**	Location **HS AE06**
	3:10pm - 3:25pm AI-Driven Smart-Liner System with DFOS for Digital Twin-Based Real-Time Monitoring of Oil and Gas Infrastructure Junyi Duan, Xingyu Wang, Huaixiao Yan, Sike Wang, Ying Huang, Chengcheng Tao		**3:10pm - 3:25pm** Study on the suitable sensor locations for tilt monitoring of power transmission tower Tatsuya Kurihara, Masayuki Saeki		**3:10pm - 3:25pm** Monitoring Slow and Dynamic Deformations of High-Rise Buildings Using Low-Cost GNSS Receivers Jayamanne Mudalige Oshadee Jayamanne, Panagiotis Psimoulis, John Owen, Nigel Penna, Chenyu Xue		**3:10pm - 3:25pm** Integrating Mixed Reality Technology, Deep Learning and Domain Knowledge for bridge inspection Zhe Yu Liu, Zhen Sun, Patricia Vanova	
	3:25pm - 3:40pm Middle range, rapid strain sensing based on PNC-OFDR and its application to bridge monitoring Yuichi Yoshimura, Kotaro Fujiwara, Yohei Taira, Michio Imai, Chao Zhang, Fumihiko Ito		**3:25pm - 3:40pm** On potentials and challenges of physics-informed structural health monitoring for civil engineering structures Matthias Baeßler, Ronald Schneider		**3:25pm - 3:40pm** Potential of profile laser scanning (PLS) for the application in load tests Florian Schill, Gregor Schacht, Torsten Harke		**3:25pm - 3:40pm** 3D projection of AI-derived concrete cracks on a Hydro Dam outlet tower Ludvig Emgård	
	3:40pm - 3:55pm Advanced Structural Monitoring and Predictive Maintenance for Railway Bridges Using Distributed Fiber-Optic Sensors Felipe Munoz, Iván Eguidazu, Julio Rodriguez, Diego Gaston-Beraza, Fernando Basarte, Javier Urricelqui, José María Perez-Casas, Marco Jimenez-Rodriguez		**3:40pm - 3:55pm** Retrofitting load measurement devices on existing anchored structures Matthias J. Rebhan, Hans-Peter Daxer, Markus A. Schuch, Clemens Klass, Florian Scharinger, Michael Reiterer		**3:40pm - 3:55pm** Advanced infrastructure health monitoring with multi-sensor systems and geospatial technologies Ernst Geutebrueck, Ahmed Elsaid, Bastian Merten, Georg Glueck		**3:40pm - 3:55pm** Computer vision-based recognition of random traffic flow for live load performance analysis of existing bridges Weilei Yu, Mayuko Nishio	
	3:55pm - 4:10pm Structural health monitoring in underground mining using fiber-optic sensing and 3D laser scanning for digital twin development Michael Dieter Martin, Nils Nöther, Jens-André Paffenholz		**3:55pm - 4:10pm** Reliability assessment of structural health monitoring systems using model – assisted probability of detection and bayesian model updating Yogi Jaelani, Francesca Marsili, Jan Grashorn, Sven Knoth, Sylvia Keßler		**3:55pm - 4:10pm** LiDAR for vibration monitoring of infrastructure: stretching limits by spatio-temporal time domain frequency analysis Oliver L. Geißendörfer, Christoph Holst		**3:55pm - 4:10pm** A novel approach to bridge repair using photogrammetry and additive manufacturing Raguez Taha, Didem Ozevin	
	4:10pm - 4:25pm Fibradike sensor: validation through full-scale field testing Alessio Höttges, Carlo Rabaiotti, Alessandro Rosso		**4:10pm - 4:25pm** Advanced Monitoring Systems for Infrastructures: Integrating 6D Sensors and Low-Cost High-Precision GNSS Roman Windl, Herbert Weitensfelder, Werner Stempfhuber		**4:10pm - 4:25pm** Application of LiDAR technology in geodetic monitoring of reclaimed landfills Grzegorz Pasternak, Janina Zaczek-Peplinska		**4:10pm - 4:25pm** Machine vision-based super-resolution reconstruction for high-precision displacement monitoring of hydraulic structures You Yang, Bo Chen, Weiqi Liu, Zekai Ma	
Coffee Break | Location: Exhibition Area								
4:45pm 6:00pm	**Sp. Session 4-3: Structural Health Monitoring of Intelligent Civil Infrastructure using Fibre Optic Sensing** Chair: **Kleo Lila** Chair: **Christoph M. Monsberger**	Location **HS P2**	**Sp. Session 9: International SHM Standards and Guidelines** Chair: **Frank A. Lehmann** Chair: **Falk Hille**	Location **HS BE01**	**Session 10: Advanced Filtering in Structural Dynamics** Chair: **Mohammad Shamim Miah** Chair: **Michael Kohl**	Location **TDK**		
	4:45pm - 5:00pm Identification and quantification of concrete cracks using various distributed fiber optic sensing techniques Christoph M. Monsberger, Madeleine Winkler, Anna Theresa Kornberger, Dirk Schlicke		**4:45pm - 5:00pm** Global perspectives on structural monitoring in civil engineering Frank A. Lehmann, Falk Hille, Branko Glišić		**4:45pm - 5:00pm** Dynamic monitoring using hidden markov regression model for predicting remaining useful life Vincent Ifeanyi Ike, Andre Jesus, Mohamed Shaheen			
	5:00pm - 5:15pm DFOS-Based Monitoring of Prestressed Concrete Bridge Girders Kleo Lila, Max Herbers, Bertram Richter, Andrea Agreiter, Maja Kreslin, Petra Triller, Andrej Anžlin, Werner Lienhart, Steffen Marx		**5:00pm - 5:15pm** Structural health monitoring guidelines for bridges in Germany Falk Hille, Frederik Wedel, Frank Lehmann, Stephan Pirskawetz		**5:00pm - 5:15pm** Identification of Damping Coefficients of Multi-degree of Freedom System Mohammad Shamim Miah, Werner Lienhart			
	5:15pm - 5:30pm Proposed approach for direct rail state monitoring with distributed acoustic sensing DAS Szymon Długosz, Tomasz Howiacki, Rafał Sieńko, Łukasz Bednarski		**5:15pm - 5:30pm** Structural Health Monitoring in the Italian Guidelines for Bridges Giancarlo Costa, Eleonora Morleo, Pier Francesco Giordano, Maria Pina Limongelli		**5:15pm - 5:30pm** Integrated Motion Measurement – a Tool for Structural Health Monitoring? Michael Kohl, Jörg Friedrich Wagner			
	5:30pm - 5:45pm Monitoring Timber Structures with Fiber Optic Sensors: State of the Art and Application to a Timber Beam Roberto Mansilla-Ruiz, Ignacio Paya-Zaforteza, Ester Garcia-Castillo, Pedro A. Calderon		**5:30pm - 5:45pm** ANYTWIN - Characterization and standardization of monitoring data Khadijah Basamad, Oliver Mosig, Matthias Koca, Lakshanadevi Radhakrishnan, Maria Walker, Steffen Marx		**5:30pm - 5:45pm** Solving structural dynamics with uncertainty quantification via evidential neural operators Pei-Lin Li, Yi-Qing Ni, Jian-Ming Ling, Shi-Fu Liu, You-Wu Wang			
	5:45pm - 6:00pm Pi-bracket fatigue sensor for crack detection monitoring near stiffeners in bridge girders Boris Telehanic, Aftab Mufti, Douglas Thomson, Baidar Bakht, Evangeline Murison		**5:45pm - 6:00pm** Inspection as a basis for structural health monitoring Stefan Grubinger, Stefan L. Burtscher, Peter Huber, Morris Tutschku, Matthias Rebhan		**5:45pm - 6:00pm** Nonparametric identification of structural nonlinear behavior based on extended Kalman particle filter and Chebyshev polynomial model Ye Zhao, Bin Xu, Yikai Yuan			

Wednesday, 03|Sept|2025

8:15am 9:15am	**Keynote Session II** Chair: **Markus Krueger** Chair: **Werner Lienhart**	Location **HS P1**	**Bridge in service structural monitoring: the SCSHM benchmark** Maria Pina Limongelli **Distributed fiber optic sensing in civil structural health monitoring at the next level – Realization of a comprehensive sensing network along the Brenner Base Tunnel** Christoph M. Monsberger, Fabian Buchmayer, Madeleine Winkler, Tobias Cordes					
Coffee Break | Location: Exhibition Area								
9:35am 10:50am	**Session 11: Fibre Optic Sensing in Field Applications** Chair: **Neil Hoult** Chair: **Bin Shi**	Location **HS P2**	**Sp. Session 12-1: Point Cloud Data Applications to evaluate Structural Conditions and Performances** Chair: **Mayuko Nishio** Chair: **Yasunori Miyamori**	Location **HS BE01**	**Session 13: Non-destructive Test Methods used for Inspection and Damage Assessment of Concrete Structures** Chair: **Christian Grosse** Chair: **Subhra Majhi**	Location **TDK**	**Sp. Session 14: Smart Sensing and Artificial Intelligence for Advanced Civil Infrastructure Monitoring and Management** Chair: **Yuguang Fu** Chair: **Sasan Farhadi**	Location **HS AE06**
	9:35am - 9:50am Insights into Rail Track Buckling from Distributed Fibre Optic Sensing Data Neil Hoult, Fuzheng Sun, Liam Butler, Merrina Zhang		**9:35am - 9:50am** A PC based FE model as an innovative learning tool in structural mechanics Yasunori Miyamori, Kakeru Komuro, Soushi Suto, Takanori Kadota, Takehiko Saito		**9:35am - 9:50am** External magnetization based elasto-magnetic sensing technique for tension monitoring of aged PSC structures Junkyeong Kim		**9:35am - 9:50am** AI-Powered vehicle classification for scalable infrastructure monitoring Leonardo Iacussi, Nicola Giulietti, Alessandro Lucci, Giuseppe Lucenti, Eamanuele Zappa, Paolo Chiariotti, Alfredo Cigada	
	9:50am - 10:05am Distributed Acoustic Sensing for Civil and Geotechnical Infrastructure Monitoring Applications Cheng-Cheng Zhang, Bin Shi, Tao Xie, Taiyin Zhang, Zhuo Chen, Zheng Wang, Qi-Yu Xu		**9:50am - 10:05am** RTK-enabled UAV for structural health monitoring without GCPs Hojune Ann, Yong-Rae Yu, Gi-Sang Kang, Juheum Oh, Jong-Jae Lee, Ki-Young Koo		**9:50am - 10:05am** Development of SFCW radar system for concrete structure inspection Sangho Lee, Keunhee Cho, Ji-Young Choi, Joo-Hyung Lee, Imjong Kwahk, Changbin Joh		**9:50am - 10:05am** Structural condition monitoring through information transferring with dimensional expansion Jaebeom Lee, Seungjun Lee, Dong-Jin Yoon	
	10:05am - 10:20 Introduction to the Fiber Optic Sensing Association (FOSA) Andreas Stern		**10:05am - 10:20am** Advanced and Efficient Monorail Facility Inspections Using Optical Measurement Technologies, Including Laser and Imaging Motoki Nakamura, Hirotoshi Kurashige, Hiroshi Yamazaki, Ryohei Hayashi, Kousuke Inoue		**10:05am - 10:20am** A Novel System Identification-Based Method for Rebar Radius Estimation in Radar SAR-Based Non-Destructive Testing Kwang-Yeun Park, Joo-Hyung Lee, Changbin Joh		**10:05am - 10:20am** Unsupervised anomaly detection for structural health monitoring: A vibration-based approach using isolation forest Emad Soltani, Florimond Gueniat, Mohamed Reza Salami	
	10:20am - 10:35am DFOS solutions covering full monitoring needs of an enlarged concrete deck viaduct Miguel Villar		**10:20am - 10:35am** Application method of sfm/mvs technique combined with point cloud data for inspection of steel bridges Ko Yamashita, Jun Kato		**10:20am - 10:35am** Non-contact non-destructive monitoring of concrete structures using pulsed Laser and microphones Subhra Majhi, Abhijit Mukherjee, Nihar Sane, Siddhant Sharma		**10:20am - 10:35am** Deep generative models to mitigate data scarcity in bridge structural health monitoring Sasan Farhadi , Mauro Corrado, Danilo Acquesta Nunes, Giulio Ventura, Giulio	
	10:35am - 10:50am Experimental study on two tunnel micro-leakage monitoring methods based on distributed fiber optic sensing technology Junyi Guo, Bin Shi, Jinhui Fang, Hongtao Jiang, Menya Sun						**10:35am - 10:50am** Smart adaptive triggering strategy for edge intelligence enabled energy-efficient sensing Shuaiwen Cui, Xiao Yu, Yuguang Fu	
Coffee Break | Location: Exhibition Area								
11:10am 12:25pm	**Session 15: Fibre Optic Sensing for Damage Detection at Bridge Strutures** Chair: **Harald Burger** Chair: **Michal Goldyn**	Location **HS P2**	**Sp. Session 12-2: Point Cloud Data Applications to evaluate Structural Sonditions and Performances** Chair: **Yasunori Miyamori** Chair: **Mayuko Nishio**	Location **HS BE01**	**Session 16: Smart Integrated Sensors and Wireless Sensors (IoT)** Chair: **Markus Krueger** Chair: **Stefan Burtscher**	Location **TDK**	**Sp. Session 17: Smart Sensing Enhanced Resilient Civil Infrastructures** Chair: **Jingkang Shi** Chair: **Yijan Zhang**	Location **HS AE06**
	11:10am - 11:25am Post-tensioned wire breaks detection method using distributed acoustic sensing in bridges & viaducts Dinesh Lakshmanan, Felipe Muñoz, Javier Urricelqui, Marco Jimenez-Rodriguez		**11:10am - 11:25am** Re-meshing Method for Finite Element Model Updating based on Extracting Structural Anomalous Information from Point Cloud Data Jiexiu Wang, Mayuko Nishio		**11:10am - 11:25am** Integrated sensor technology for basalt-reinforced segmental lining elements Alexandros Evangelatos, Lukas Heindler, Robert Galler, Thomas Thurner		**11:10am - 11:25am** Study on the Propagation Law of Magnetic Induction Signals for Wireless Communication in Underground Structures Yiyan Zhang, Dongming Zhang, Jingkang Shi, Mingtao Chen, Erwu Liu	
	11:25am - 11:40am Detection of steel fractures in existing prestressed bridges with DFOS Harald Burger, Nicholas Schramm, Oliver Fischer		**11:25am - 11:40am** Synthetic environment for close-range photogrammetry-based surface friction assessment of road infrastructures Cheng Peng, Yi Jiang, Shuo Li		**11:25am - 11:40am** Wind input and acceleration & displacement outputs monitoring system for high-guyed masts in ROSEHIPS project Miaomin Wang, Duncan Gould, Richard Stafford, Ki-Young Koo, James Brownjohn		**11:25am - 11:40am** Smart pavement subsurface monitoring with distributed embedded passive RF sensor network Kent X. Eng, Zygmunt J. Haas, Samir R. Das, Petar Djurić, Milutin Stanaćević, Branko Glisic	
	11:40am - 11:55am Distributed fiber optic sensing of bridges with stress corrosion cracking Michal Goldyn, Max Herbers, Bertram Richter, Katarzyna Zdanowicz, Steffen Marx		**11:40am - 11:55am** Developing a Deep Learning-Based Method to Segment Bridge Members by using 2D Cross Sectional Point Clouds Nao Hidaka, Naofumi Hashimoto, Ei Watanabe, Daisuke Uchiyama		**11:40am - 11:55am** Wireless Multi Sensor Monitoring of Engineering Structures Markus Rennen		**11:40am - 11:55am** A wireless passive RFID patch antenna strain sensor Chengkai Wei, Jingkang Shi, Zhenchang Guan	
	11:55am - 12:10pm Lifetime elongation of existing prestressed bridges with a lack of structural integrity using DFOS Sören Neumann, Harald Burger, Sebastian Lamatsch, Oliver Fischer		**11:55am - 12:10pm** A 3D Virtual Assembly Method for Cable-Stayed Bridge Closure Using Laser Scanning Yan Xu, Zhenzhen Cao		**11:55am - 12:10pm** Practical approach to calibrating wireless sensors for use in structural health monitoring in an outdoor environment Michael Markus Petschacher, Markus Krüger		**11:55am - 12:10pm** 25-year field monitoring of the Tsing Ma Suspension Bridge in Hong Kong Yong Xia, Lu Zhang, Tian Lu, Xiaoyou Wang	
	12:10pm - 12:25pm Concrete signature in long-term Distributed Fiber Optic Strain Sensing: Challenges and opportunities for Structural Health Monitoring Lisa Ulbrich, Alessia Abbozzo, Frank Jesse, Marco di Prisco		**12:10pm - 12:25pm** Short- and long-term monitoring of bridges using terrestrial laser scanning data Thomas Moser, Werner Lienhart		**12:10pm - 12:25pm** eNodes: GNSS Time-Synchronised Wireless Accelermoter Measurement Nodes capable of operating indoors Ki Young Koo, Miaomin Wang, Zuo Zhu, James Brownjohn			
12:25pm 1:40pm	**Lunch Break | Location: Exhibition Area**							

Wednesday, 03|Sept|2025

1:40pm 2:55pm	Session 18: FBG and DFOS Applications for Infrastructure and Environmental Monitoring Chair: **Bin Shi** Chair: **Yitian Liang**	Location **HS P2**	Session 19: Risk Assessment and Monitoring of Civil Structures Chair: **Max Fiedler** Chair: **Horst Trattnig**	Location **HS BE01**	Session 20: Wind-Loaded Structures and Monitoring under Environmental Conditions Chair: **Lauren Elizabeth Linderman** Chair: **Chao Wang**	Location **TDK**	Sp. Session 21: Intelligent Sensing and Safety Assessment of Bridge Cluster Service Performance Chair: **Shunlong Li** Chair: **Yapeng Guo**	Location **HS AE06**
	1:40pm - 1:55pm Towards Accurate Road Health Monitoring: A Damage Detection System Using FBG Sensors Seyed Ali Golmohammadi Tavalaei, Navid Hasheminejad, Aliakbar Ghaderiaram, Wim Van den bergh, David Hernando		**1:40pm - 1:55pm** Structural monitoring of Zeeland Bridge - improved structural identification by combining a modular model updating framework with a mobile measurement setup during load tests Floris Besseling, Coen Kortendijk, Janno De Bruijn, Eliz-Mari Lourens		**1:40pm - 1:55pm** Understanding the dynamic behavior of large sign structures under wind loading Lauren Elizabeth Linderman, Nicole Johnson, Lam Nguyen, Dominik Schillinger, Michele Guala, Catherine French		**1:40pm - 1:55pm** Graph network representation and intelligent evaluation for service performance of bridge clusters Shunlong Li, Jie Wang	
	1:55pm - 2:10pm Etched fiber bragg grating sensor-based groundwater salinity monitoring for seawater intrusion Hongtao Jiang, Junyi Guo, Bin Shi, Mengya Sun, Guangqing Wei		**1:55pm - 2:10pm** Scotiabank saddledome roof monitoring program Vidyadhar Limaye, Subharajit Roy, Mark LeBlanc, Elizabeth Whittaker, Lindsay Alleyne		**1:55pm - 2:10pm** 6-Component Operational Modal Analysis of wind turbines for damage detection Laurin Müller, Anjali Dhabu, Kay Bode, Felix Bernauer, Stefanie Donner, Céline Hadziioannou		**1:55pm - 2:10pm** Lightweight vision fundamental model-based structural surface crack segmentation using model distillation Yapeng Guo, Shunlong Li	
	2:10pm - 2:25pm Geo-hazard DFOS monitoring and its applications Shi Bin, Honghu Zhu, Chengcheng Zhang, Mengya Sun, Wei Zhang, Taiyin Zhang, Junyi Guo		**2:10pm - 2:25pm** Long-term monitoring and data processing of a continuous prestressed concrete bridge Marc Savard, Jean-François Laflamme		**2:10pm - 2:25pm** Estimation of Wind Turbine Foundation Settlement and Error Modeling Using High-Resolution Dual-Orbit Satellite Data Veronica Dallari, Francesca Grassi, Elisa Bassoli, Francesco Mancini, Loris Vincenzi		**2:10pm - 2:25pm** Spatial-Temporal Graph Model for Environmental Temperature and Traffic Flow Prediction of City Regions Chenglong Lin, Yang Xu	
	2:25pm - 2:40pm Structural behaviors of prestressed double-T slab under loadings with seasonal effects Yitian Liang, Branko Glisic		**2:25pm - 2:40pm** Smart Structural Health Monitoring with Acoustic Emission Michael Häuserer		**2:25pm - 2:40pm** Distributed fibre optic sensing of decommissioned wind turbine blades under bending Chao Wang, Shaoqiu Zhang, Kieran Ruane, Vesna Jaksic, Zili Li		**2:25pm - 2:40pm** Ultimate flexural strength analysis of serving concrete main girders considering bridge deck pavement Hongtao Cui, Zhonglong Li, Yapeng Guo, Shunlong Li	
	2:40pm - 2:55pm Vibration Analysis of Ship Hulls using Fiber Bragg Grating Gethin Roberts, Irena Áarberg, Werner Lienhart		**2:40pm - 2:55pm** The collapse of the Carola bridge – Forensic engineering and palliative monitoring Max Fiedler, Gregor Schacht, Robert Ritter, Steffen Marx, Silke Scheerer, Luis Clages, Gino Ebell, David Czeschka, Chris Voigt		**2:40pm - 2:55pm** Prediction of urban wind speed during tropical cyclones using a novel deep learning-based spatiotemporal model Yuan-Jiang Zeng, Zheng-Wei Chen, Yi-Qing Ni, Pak-Wai Chan			

Coffee Break | Location: Exhibition Area

3:15pm 5:00pm	Sp. Session 22: Structural Health Monitoring of Transport Infrastructures using Drive-by Monitoring Chair: **Zhenkun Li** Chair: **Daniel Cantero**	Location **HS P2**	Sp. Session 23: Population Based Structural Health Monitoring (PBSHM) Chair: Su Taylor Chair: David Hester	Location **HS BE01**	Sp. Session 24: Advancements in vibration-based bridge health monitoring Chair: **Carlo Rainieri** Chair: **Daniele Zonta**	Location **TDK**	Session 25: Materials-Based Monitoring and Structural Health Assessment Chair: **Alfred Strauss** Chair: **Jasper Vollmert**	Location **HS AE06**
	3:15pm - 3:30pm Data-Driven Monitoring Solutions for Concrete Structures: Long-Term Insights with CorroDec2G Sensors Christian Steffes, Roman Koch		**3:15pm - 3:30pm** A methodology for data collection and aggregation in population-based structural health monitoring ecosystems David Ren-Huang Lim, Alan J. Ferguson, Daniel S. Brennan, David Hester, Roger Woods		**3:15pm - 3:30pm** Preliminary results from a field application of dynamic monitoring on three spans of a railway bridge Eleonora Massarelli, Marco Civera, Giulio Ventura, Bernardino Chiaia		**3:15pm - 3:30pm** Intelligent Imaging: Transforming Concrete Assessment Methods with AI Afaq Ahmad, Vagelis Plevris, M Ullah, Junaid Mir	
	3:30pm - 3:45pm Numerical Dataset for benchmarking of Drive-by Bridge Monitoring Methods Daniel Cantero, Zohaib Sarwar, Abdollah Malekjafarian, Robert Corbally, Mehrisadat Makki Alamdari, Prasad Cheema, Jatin Aggarwal, Hae Young Noh, Jingxiao Liu		**3:30pm - 3:45pm** Towards a plug and play population-based structural health monitoring aggregation pipeline design for resource constrained systems David Ren-Huang Lim, Alan J. Ferguson, Connor O'Higgins, David Hester, Roger Woods		**3:30pm - 3:45pm** A damage screening method of the concrete slab focusing on correlation of mode shapes Takanori Kadota, Takuya Daigo, Akihiro Tomioka, Yasunori Miyamori, Toshiyuki Oshima		**3:30pm - 3:45pm** Monitoring of Non-Linearities in Fatigue Degradation of Metallic Materials Using Techniques beyond Stress and Strain Christian Boller, Peter Starke	
	3:45pm - 4:00pm Indirect footbridge damage classification using explainable deep learning: a field testing study Zhenkun Li, Yifu Lan, Weiwei Lin		**3:45pm - 4:00pm** Advancing PEAR: Development of a Bridge Benchmark Datasets for PBSHM Research Connor O'Higgins, Tristan Gowdridge, David Hester, Keith Worden, Daniel S. Brennan		**3:45pm - 4:00pm** Feasibility of micro-motion from SAR imagery for vibration-based SHM Alessandro Lotti, Aleksanteri B. Vattulainen, Chiara Suppi, Sebastian Diaz Riofrio, Pietro Milillo, Enrico Tubaldi, Daniele Zonta, Carmine Clemente		**3:45pm - 4:00pm** Towards structural health monitoring of clay-printed structures Jasper Vollmert, Patricia Peralta, Adel Alatassi, Alexander Chmelnizkij, Kay Smarsly	
	4:00pm - 4:15pm Drive-by bridge modal identification under multi-source excitations Jie Tan, Jiantao Li		**4:00pm - 4:15pm** A Transfer Learning approach for damage identification in operational viaducts Eleonora Morleo, Maria Pina Limongelli, Andrea Piscini, Edoardo Troielli		**4:00pm - 4:15pm** Setting an optimal threshold for novelty detection in data-driven Structural Health Monitoring Alessio De Corso, Carlo Rainieri		**4:00pm - 4:15pm** Icelandic turf houses: A one-year monitoring overview Kathryn Ann Teeter, Björn Marteinsson, Ágústa Kristófersdóttir, Alma Sigurðardóttir, Dórótea H Sigurðardóttir	
	4:15pm - 4:30pm Field test on tunnel indirect damage identification from moving train response Qi Li, Xiongyao Xie, Kun Zeng		**4:15pm - 4:30pm** The future of conservation: Citizen Science models for the photomonitoring of cultural heritage Antonio Cosentino, Jessica Clementi, Antonio Molinari, Veronica Sanvito, Paolo Mazzanti		**4:30pm - 4:45pm** Model Updating and Damage Detection for Bridge Integrity Management Eray Temur, Maria Pina Limongelli, Andrea Piscini, Edoardo Troielli		**4:30pm - 4:45pm** Detailed material testing of adobe structures to complete a comprehensive SHM approach that includes laser scanning and ambient vibration studies Shakhzod Takhirov, Zukhritdin Ergashev, Bakhodir Rakhmonov, Amir Gilani, Mirzokhid Akhmedov, Ravshan Shamansurov	
			4:45pm - 5:00pm A novel AI-Wavelet based framework for benchmark data analysis in structural health monitoring Ahmed Silik, Mohammad Noori, Nabeel Farhan, Tianyu Wang, Wael Altabey, Zhishen Wu		**4:45pm - 5:00pm** On a data compression technique for acceleration signals from a railway bridge Pranav Yadav, Vaibhav Gupta, U Saravanan		**4:45pm - 5:00pm** Redundant Monitoring Strategies for Structural and Geohazard Assessment Using Wireless Tiltmeters and LiDAR on Linked Highway Bridges in Colombia Victor Restrepo, Hector Salazar, Jean Piedrahita	

Thursday, 04|Sept|2025

8:15am 9:15am	**Keynote Session III** Chair: **Werner Lienhart** Chair: **Markus Krueger**	Location **HS P1**	**Stevenson creek experimental dam monitoring centenary: Overview and perspectives of strain sensing and strain-based monitoring of civil structures** Branko Glisic **The power of optical and SAR imaging for remote monitoring of land and infrastructure** Paolo Mazzanti					
Coffee Break | Location: Exhibition Area								
9:35am 10:50am	**Sp. Session 26-1: Bridge Model Calibration and Validation Using Structural Health Monitoring Data** Chair: **Ivan Duvnjak** Chair: **Suzana Ereiz**	Location **HS P2**	**Session 27-1: Monitoring applications using InSAR** Chair: **Antje Thiele** Chair: **Douglas Thomson**	Location **HS BE01**	**Session 28: Smart Embedded Sensors and Non-destructive Test Methods for Quality Control** Chair: **Markus Krueger** Chair: **Matthias Rebhan**	Location **TDK**	**Session 29: Hazard, Desaster and Damage Detection for Infrastructure** Chair: **Aftab Mufti** Chair: **Rolands Kromanis**	Location **HS AE06**
	9:35am - 9:50am Optimizing bridge recalculation: uncertainty in SHM-based recalculation of prestressed concrete bridges Maria Walker, Cedric Eisermann, Jan-Hauke Bartels, Steffen Marx		**9:35am - 9:50am** InSAR as a Component of Geotechnical Monitoring During Subway Construction in Prague Ivana Hlavacova, Jan Kolomaznik, Juraj Struhar		**9:35am - 9:50am** An EMI-based approach for Structural Health Monitoring of a Space Reinforced Concrete Frame Structure George M. Sapidis, Maria C. Naoum, Nikos A. Papadopoulos, Maristella E. Voutetaki, Constantin E. Chalioris, Theodoros C. Rousakis		**9:35am - 9:50am** Study on Methods for Identifying and Evaluating Damage to Cross-Sea Bridges Subjected to Ship Collisions Jian Guo, Yuhao Cui, Zheng Wang, Jiahui Wu	
	9:50am - 10:05am Hangar Stressing on the 6th Street Viaduct Replacement, Los Angeles. Paul Thurlow		**9:50am - 10:05am** Utilizing PSDefoPAT™ to analyze surface deformation of embankment dams Madeline Evers, Antje Thiele		**9:50am - 10:05am** Tactile Pressure Sensors to analyse Anchor Wall Behaviour in mid-scale Experiments Julian Schleicher, Matthias J. Rebhan, Hans-Peter Daxer, Vera Pamminger, André Arnold, Franz Tschuchnigg		**9:50am - 10:05am** An automatic system for the rapid post-earthquake safety assessment of bridges Marlon Aguero, Derek Skolnik, Mauricio Ciudad-Real	
	10:05am - 10:20am SHM Application in Development of New Live Load Distribution Factors for Timber Bridges Vidyadhar Limaye, Philip Vickers, Cyrus Hoseinpour, Amjad Memon, Justin Clarke		**10:05am - 10:20am** Exploring InSAR Capabilities for Bridge structural health monitoring using TerraSAR-X and Sentinel-1 Data Maciej Kwapisz, Vazul Boros, Karl Heinz Gutjahr, Ivana Hlavacova, Cesar Martinez, Stefan Schlaffer, Juraj Struhar, Alois Vorwagner		**10:05am - 10:20am** Long term monitoring of the Balladelaan bridge using Smart Aggregates Coen Kortendijk, Anke Hoekstra		**10:05am - 10:20am** Bridge superstructure vibrational analysis as means to detect scour in a medium span bridge Junhui Zhao, Kareem Helmy, Boris Telehanic, Evangeline Murison, Aftab Mufti, Douglas Thomson	
	10:20am - 10:35am Full-Scale Bridge Testing: Lessons from the Demolition of the Steinavötn Bridge Dórótea H Sigurðardóttir, Ching Yi Tsai, Guðmundur Valur Guðmundsson		**10:20am - 10:35am** Satellite-based InSAR for monitoring and safeguarding high-voltage power pylons amid the energy transition Markus Dörfler, Markus Keuschnig, Ingo Hartmeyer		**10:20am - 10:35am** Structural health monitoring of composite plate using piezoelectric transducer Thanh Canh Huynh		**10:20am - 10:35am** 2D sonar techniques for monitoring the canal bed morphology of entrances to navigation locks Mohsen Bastani, Rolands Kromanis	
	10:35am - 10:50am Advancing high-fidelity digital Twin Technology for Structural Health Monitoring Ihar Antonau, Suneth Warnakulasuriya, Talhah Ansari, Roland Wüchner, Rainald Löhner, Facundo Nicolas Airaudo, Habir Antil		**10:35am - 10:50am** Remote sensing for stability assessment of river bridges: Case study of the Red River Bridge in Winnipeg, Canada Daniel Cusson, Helen Stewart, Chaouki Regoui, Junhui Zhao, Karim Helmi, Boris Telehanic, Evangeline Murison, Doug Thomson, Aftab Mufti, Shawn Clark					
Coffee Break | Location: Exhibition Area								
11:10am 12:25pm	**Sp. Session 26-2: Bridge Model Calibration and Validation Using Structural Health Monitoring Data** Chair: **Suzana Ereiz** Chair: **Ivan Duvnjak**	Location **HS P2**	**Session 27-2: Monitoring applications using InSAR** Chair: **Madeline Evers** Chair: **Vera Costantini**	Location **HS BE01**	**Session 30: SHM of Tendons and Pipelines** Chair: **Ivan M. Diaz** Chair: **Dong-Jin Yoon**	Location **TDK**	**Session 31: System-level SHM and Emerging Technologies** Chair: **Yara Lorena Rossi** Chair: **Jayamanne Mudalige Oshadee Jayamanne**	Location **HS AE06**
	11:10am - 11:25am Advancing high fidelity finite element model updating using cooperative game theory: a novel framework for structural optimization Suzana Ereiz, Ivan Duvnjak, Javier Fernando Jiménez-Alonso, Marko Bartolac, Janko Košćak, Domagoj Damjanović		**11:10am - 11:25am** Potential of InSAR for Structural Health Monitoring of Flood Protection Systems Vazul Boros, Maciej Kwapisz, Petr Dohnalík, Philip Leopold, Alois Vorwagner, Antje Thiele, Madeline Evers		**11:10am - 11:25am** On-Line Health Monitoring of Underground Pipelines by Source Localization of Leak Damages Dong-Jin Yoon, Sun-Ho Lee, Choon-Su Park		**11:10am - 11:25am** Exploration of edge computing for monitoring a four-story building frame model Qing-Chen Tang, Emil Kool, Daniel Colmenares, Imane Bayane, Raid Karoumi	
	11:25am - 11:40am Efficacy of decoupling techniques to extract the static strain response from the dynamic response of a bridge under a moving vehicle using low pass filter Sarath R., Saravanan U.		**11:25am - 11:40am** ISABHEL (Integrated SAtellite and ground-based monitoring for Bridge HEalth Lifetime assessment) Vera Costantini, Bernardino Chiaia, Marco Civera, Alberto Ciavattone, Davide Ambrosio, Carlo Ranalletta, Emanuele Del Monte, Roberta Marini		**11:25am - 11:40am** Effects of grout-strand interface modelling on the degradation of external grouted post-tensioning tendons Belen Vecino, Carlos M.C. Renedo,Luis Chillitupa-Palomino, Iván M. Diaz		**11:25am - 11:40am** On the use of 6C seismic station for bending-to-shear and torsional building response assessment. Yara Lorena Rossi, Philippe Guéguen, Felix Bernauer, Kate Huihsuan Chen, Chin-Jen Lin, Chin-Sang Ku, Yaochieh Chen	
	11:40am - 11:55am Laboratory Testing of Old Bridge Girders: Preliminary Results Maja Kreslin, Andrej Anžlin, Mirko Kosič, Doron Hekič, Petra Triller		**11:40am - 11:55am** Smart Geotechnical Asset Management (SGAM): Enhancing predictive maintenance with data-driven insights and Earth Observation technologies Alessandro Brunetti, Maria Elena Di Renzo, Michele Gaeta, Paolo Mazzanti, Giandomenico Mastrantoni, Emanuela Valerio, Vera Costantini		**11:40am - 11:55am** Autonomous peak-picking procedure for tension force estimation in cables and external post-tensioning tendons Luis Chillitupa-Palomino, Carlos M.C. Renedo, Jaime H. Garcia-Palacios, Iván M. Díaz		**11:40am - 11:55am** Integration of seismic interferometry and system identification techniques for real-time structural health monitoring: Automated detection of shear-wave velocity changes using skyscraper data for validation Erol Kalkan, Mohammad AlHamaydeh, Weiping Wen	
	11:55am - 12:10pm Investigation of the causes of the unusual gap between the bridge and abutment using long-term monitoring Sunao Iwabuchi, Tomohisa Takehara, Yasunori Miyamori, Takanori Kadota, Yoichi Hinata, Toshiyuki Oshima				**11:55am - 12:10pm** Field monitoring and mitigation for high-mode vortex-induced vibrations of cables in cable-stayed bridges Yuxuan Yan, Xin Wang, Hao Hu, Hua Guan, Kai Wang		**11:55am - 12:10pm** Experimental assessment of GNSS-smartphone performance in monitoring dynamic motion Panagiotis Psimoulis, Chenyu Xue, Mudalige Oshadee Jayamanne Jayamanne, Guangcai Li, Jianghui Geng	

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	12:10pm - 12:25pm Monitoring the dynamic sensitivity of the Solkan footbridge to user-induced excitation Mirko Kosič, Doron Hekič, Izabela Drygala				**12:10pm - 12:25pm** Field Application of TFC-based Electromagnetic Sensors for Monitoring Cross-sectional Loss in Tendons of Bridges Joo-Hyung Lee, Kwang-Yeun Park, Ji-Young Choi, Sanho Lee, Changbin Joh		**12:10pm - 12:25pm** Identification of Structural Dynamic Loads- From Physical Methods to Physics Informed Deep Learning Paradigm Ying Lei, Lijun Liu, Fubo Zhang	
12:25pm 1:40pm	**Lunch Break | Location: Exhibition Area**							
1:40pm 2:55pm	**Sp. Session 32: The SCSHM Benchmark bridge: first studies and results** Chair: **Maria Pina Limongelli** Chair: **Douglas Thomson**	Location **HS P2**	**Session 33: SHM of Tall and Historic Buildings** Chair: **Lidija Špiranec** Chair: **Jiayi Zheng**	Location **HS BE01**	**Session 34: Implementation and Digitalization in SHM** Chair: **Michael Olipitz** Chair: **Max Fiedler**	Location **TDK**		
	1:40pm - 1:55pm Multi-purpose bridge strain data fusion for BWIM and structural monitoring Tommaso Panigati, Maria Pina Limongelli		**1:40pm - 1:55pm** Study of semi-rigid joints effect on global stiffness of space steel structure based on monitoring data Cheng Yuan, Wei Lu, Jun Teng, Weihua Hu		**1:40pm - 1:55pm** Digitalization of existing measurement equipment as a valid basis for monitoring and structural behaviour Stefan Burtscher, Peter Huber, Morris Tutschku, Markus Schuch, Florian Scharinger, Matthias Rebhan			
	1:55pm - 2:10pm Vehicle speed estimation using convoluted reciprocity for bridge structural monitoring Daniel Cantero		**1:55pm - 2:10pm** Sustaining vertical giants: Autonomous monitoring solutions for the construction and lifecycle of tall buildings Lidija Špiranec		**1:55pm - 2:10pm** Increasing the value of bridge SHM data by leveraging network-level open data Paul R.A. Fidler, Sam Cocking, Farhad Huseynov, Miguel Bravo Haro, Pedro Ubeda Luengo, Campbell R. Middleton, Jennifer M. Schooling			
	2:10pm - 2:25pm Physics-Informed Surrogate Modeling of the SCSHM Benchmark Eray Temur, Maria Pina Limongelli		**2:10pm - 2:25pm** Multi-scale digital twin for a high-rise structure combining ANN and monitoring data Hetian Shao, Wei Lu, Wenchang Zheng, Weihua Hu, Jun Teng, Eric M. Lui		**2:10pm - 2:25pm** A comprehensive workflow for digitizing and determining condition indicators for bridge and building construction Michael Olipitz, Roland Jung			
	2:25pm - 2:40pm Vibrational analysis of the benchmark data set Douglas Thomson		**2:25pm - 2:40pm** Assessment method for torsional performance of high-rise buildings based on period ratio Jiayi Zheng, Wei Lu, Weihua Hu, Jun Teng		**2:25pm - 2:40pm** Principles and case study of IMSGeo: Automatic displacement monitoring system for construction sites Janina Zaczek-Peplinska, Maria Kowalska, Lech Saloni			
Coffee Break | Location: Exhibition Area								
3:15pm 3:45pm	**Closing Ceremony** Chair: **Werner Lienhart** Chair: **Markus Krueger**	Location **HS P1**						

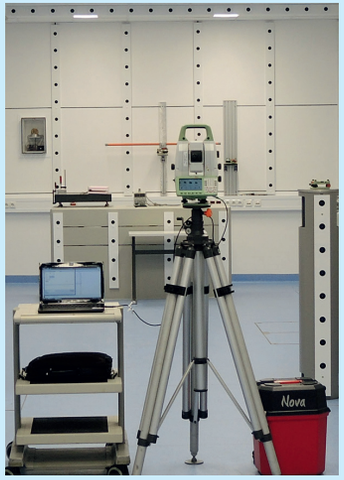
Friday, 05|Sept|2025 - Half Day Tours

Tour 2: Testing and Calibration Facilities of TU Graz

Schedule

Meeting point:
08:30am
Ground floor Graz
University of Technology,
Steyrergasse 30, 8010 Graz

Scientific lead:
Prof. Dr. Werner Lienhart



This technical tour leads to the geodetic measurment lab where monitoring instruments like total stations, laser scanner, fiber optic sensors etc. are tested and calibrated. In the second part of the tour we will visit the hydraulic engineering lab with its simulation and test facilities.

Tour 4: Potential applications and limitations of wireless monitoring

Schedule

Meeting point:
08:20am
Structural Engineering
Centre, North entrance,
Inffeldgasse 24, 8010 Graz

Scientific lead:
Prof. Dr. Markus Krüger
Dr. Stefan Burtscher
Dipl.-Ing. Michael
Petschacher

In this workshop you will learn about the technical possibilities and limitations of wireless monitoring systems to address relevant issues in structural monitoring. This ranges from the selection of measurement methodology, sensors and wireless data transmission technologies to aspects of sensor calibration and data processing and visualisation. Practical applications for different scenarios are presented.

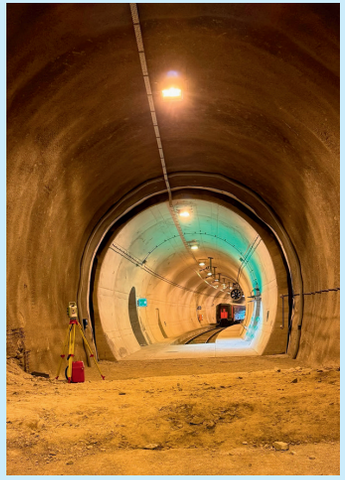
Friday, 05|Sept|2025 - Full Day Tours

Tour 1: Tunnel Research Center

Schedule

Meeting point:
08:00am
Parking lot at Graz
University of Technology,
Steyrergasse 30, 8010 Graz

Scientific lead:
Dipl.-Ing. Lisa Strasser
Dipl.-Ing. Andrea Agreiter



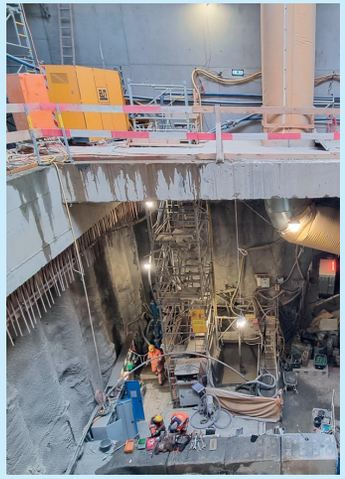
The tunnel research center Zentrum am Berg (ZAB) is a unique research for all aspects in tunnelling from construction to operation and maintenance. The whole day field trip concentrates on the structural health monitoring of new and exisiting tunnels. We will visit the four tunnel tubes of the research center and make a ride in an old mining truck.

Tour 3: Technical Tour 3: Active Monitoring Site: Subway construction Vienna

Schedule

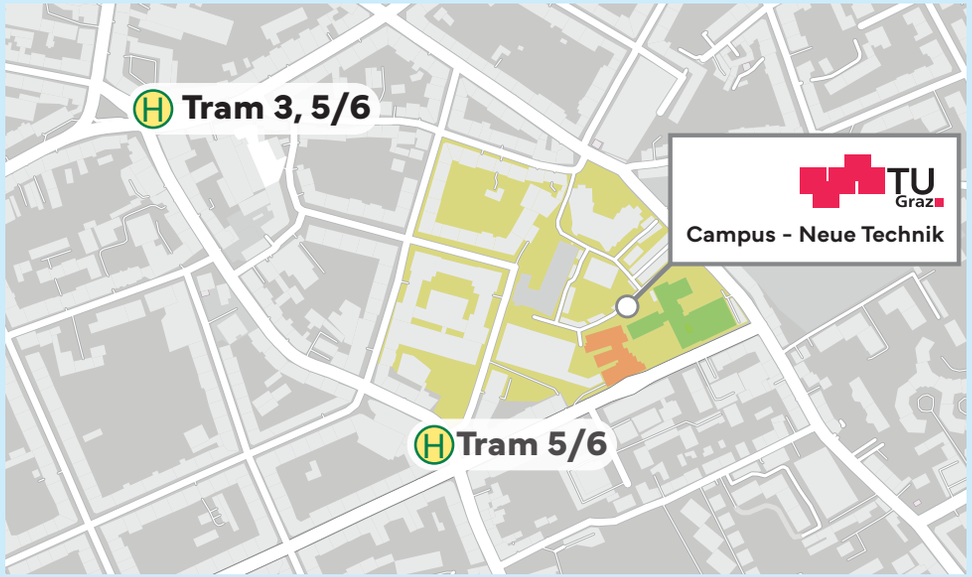
Meeting point:
08:00am
Parking lot at Graz
University of Technology,
Steyrergasse 30, 8010 Graz

Scientific lead:
Dipl.-Ing. Thomas Moser
Dr.techn. Helmut Woschitz



This tour will lead to monitoring sites of the subway lines in Vienna. We will visit the above ground and underground monitoring installation at two access points.

Maps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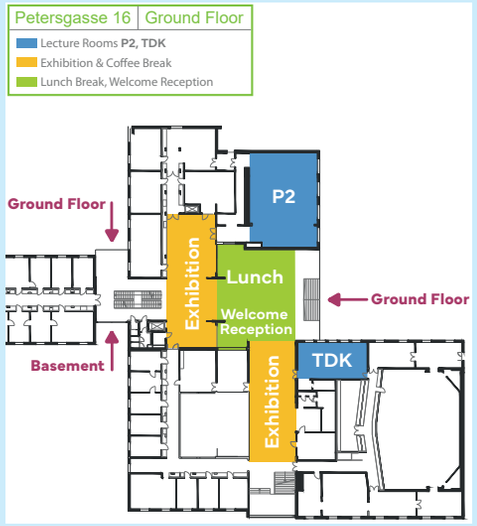
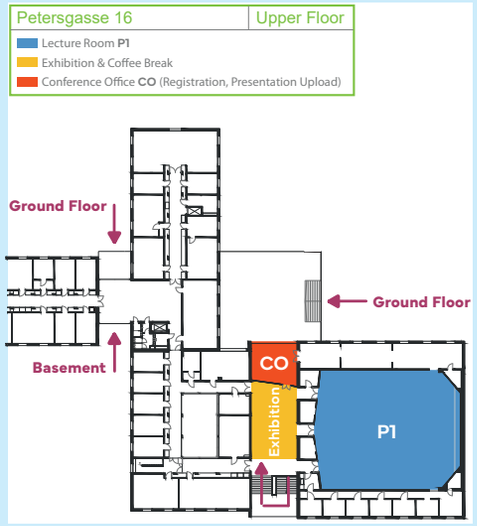
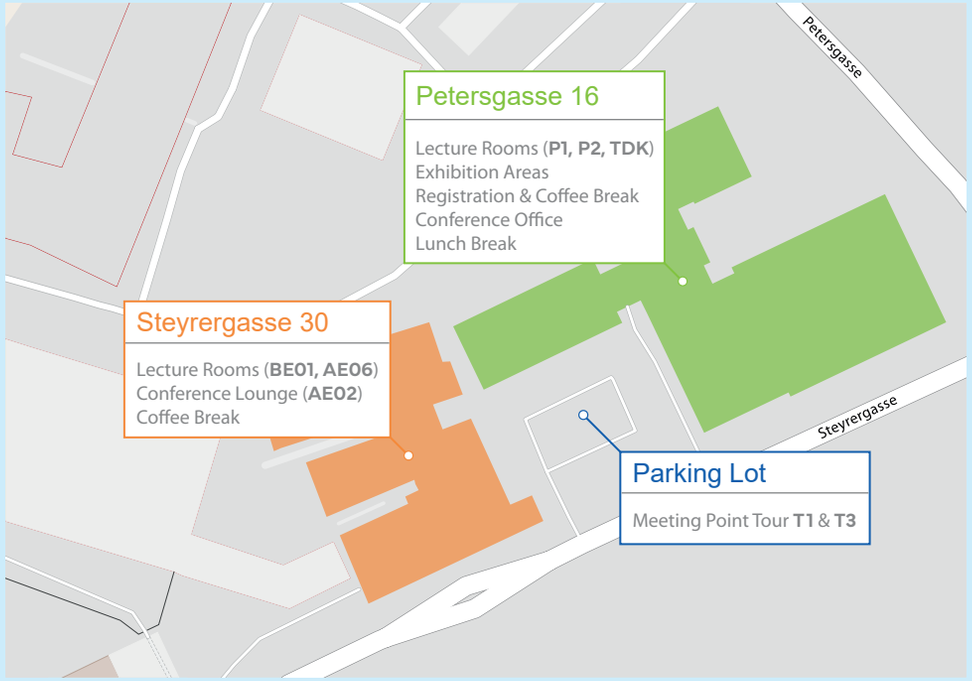
TU Graz
Campus - Neue Technik
Tram 5/6


Petersgasse 16 | Ground Floor
Lecture Rooms P2, TDK
Exhibition & Coffee Break
Lunch Break, Welcome Reception
Ground Floor
P2
Exhibition
Lunch
Welcome Reception
Ground Floor
Basement
Exhibition
TDK


Petersgasse 16 | Upper Floor
Lecture Room P1
Exhibition & Coffee Break
Conference Office CO (Registration, Presentation Upload)
Ground Floor
Ground Floor
Basement
CO
Exhibition
P1


Petersgasse
Petersgasse 16
Lecture Rooms (P1, P2, TDK)
Exhibition Areas
Registration & Coffee Break
Conference Office
Lunch Break
Steyrergasse 30
Lecture Rooms (BE01, AE06)
Conference Lounge (AE02)
Coffee Break
Steyrergasse
Parking Lot
Meeting Point Tour T1 & T3


Steyrergasse 30 | Ground Floor
Lecture Rooms AE06, BE01
Lounge
Coffee Break
Ground Floor
Ground Floor
BE01
Coffee
AE06
Lounge
Basement

The nerves of your structure

Distributed fiber-optic sensing solutions for energy, geotechnics and smart infrastructure

fibrisTerre

Geotechnical and structural engineering

Renewable energy

Power cables

Mining and Nuclear waste

Pipelines and Boreholes

Scientific Research

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