The 17TH Australian Network of Structural Health Monitoring Workshop

Hosted by

EngAnalysis

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

This premier event is jointly hosted by EngAnalysis and The University of Newcastle.

Australia's unique challenges—such as sparse populations, remote infrastructure, and a need for efficient asset management—have driven the development of world-leading structural health monitoring (SHM) practices.

The 2025 Conference theme is "Custodianship" with a focus on the strategic use of structural data to support long-term asset stewardship.

Topics will explore the emergent capability and limitations of the evolving technologies that facilitate improved management of structures and risk.

The annual ANSHM Workshop brings together experts across disciplines—technology providers, infrastructure owners, researchers, and regulators—to present cutting-edge developments and flagship projects in the SHM space.

We anticipate an audience of 60–80 technical professionals, including senior engineers, researchers, and key decision-makers from utilities, infrastructure owners, and technology developers across Australia.

Gold Sponsors

Sterling. Rockfield Transurban

Silver Sponsor

Geomotion AUSTRALIA

Bronze Sponsors (& Trade Desks)

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STAY CONNECTED - ANSHM25@enganalysis.com.au or visit www.17ANSHM2025.com.au

REGISTRATION – https://www.trybooking.com/DCPPE

LATE ABSTRACT SUBMISSION – email ANSHM25@enganalysis.com.au

If you have insight from research or the application of monitoring technologies to inform asset management and are happy to share the successes and shortcomings, please submit an abstract to:

There is a TMR “So What” award for the most impactful research, presentation and deployment.

Please submit via - https://easychair.org/conferences/?conf=anshm2025

CONFERENCE VENUE

The Q Building, 16B Honeysuckle Drive, The University of Newcastle NSW 2300.

ACCOMMODATION

A wide range of accommodation options are available near the ANSHM Conference venue, from luxury hotels to boutique stays — all within easy walking distance. This convenient proximity allows delegates to move seamlessly between the workshop and their hotel.

EngAnalysis has partnered with select hotels to offer Special Event Only Accommodation Rates exclusively for registered delegates. Please note that all rates are subject to change and availability.

https://littlenationalhotel.com.au/newcastle/ - for bookings use code **ANSHM2025**

A 500m walk to the conference

https://www.rydges.com/ - for bookings use code **RYDNTL15**

600m walk to the conference

https://www.questapartments.com.au/properties/nsw/newcastle/quest-newcastle

For bookings use code **ANSHM2025**

400m walk to the conference

https://www.idem.events/r/anshm-f71ffd69

The Novotel is on the beach. The light rail is a quick and easy option for transport to the Q Building.

The 17TH Australian Network of Structural Health Monitoring Workshop

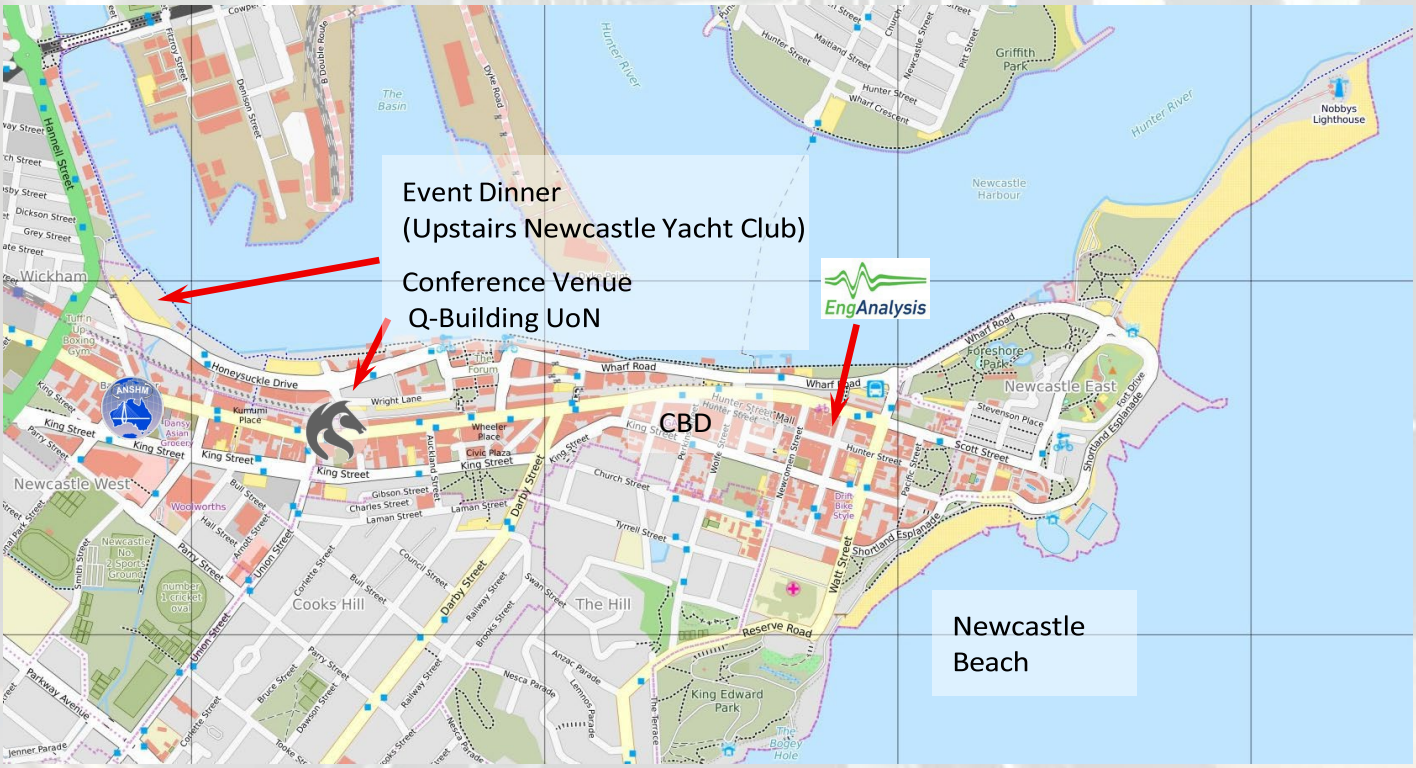
The Q Building, 16B Honeysuckle Drive

The University of Newcastle

Day 1, Thursday 20th of November

Topic	Start Time	Speaker	Affiliation	Topic
Registration	8:00 AM-8.30 AM		Organising Committee	Registration – Q Building, 16B Honeysuckle Drive, Newcastle
Welcome Address	8:30 AM	John Vazey	Organising Committee	Welcome & Logistics
	8:40 AM	Tommy Chan	QUT & President Of ANSHM	Presidential Address
Market Leading Projects	8:50 AM	John Vazey	EngAnalysis	Advances in B-WIM and digital twin technologies that deliver outcomes
	9:10 AM	Debra McLaughlin	Jacobs	Perils, pitfalls and progress: navigating design and installation of SHM
	9:30 AM	James Debney	Geomotion	Advanced strategies for quantifying settlement
	9:50 AM	Govinda Pandey	Rockfield	Structural Health Monitoring – The Next Frontier
	10:10 AM	**Panel Discussion & Questions: Technology Providers** Chair: Peter Runcie, John Vazey, Debra McLaughlin, James Debney, Govinda Pandey		
Break	**10:40 AM**	**Morning Tea**		
What it means to own an asset worth more than you are going to earn in your lifetime	11:10 AM	Desiree Nortje	Transurban	The problems of the toilet-seat syndrome: Overcoming organisational reluctance to address complex engineering problems
	11:30 AM	Pinaki Banerjee	Queensland Rail	How SHM strategies are providing value in assessing Structural damage
	11:50 AM	Duncan Ward	TMR Qld	Learnings from Bridge and Heavy Vehicle monitoring
	12:10 PM	**Panel Discussion & Questions: Utilities** Pavez Shah (TfNSW), Desiree Nortje (Transurban), Pinaki Banerjee (Queensland Rail), Duncan Ward (TMR Qld)		
Break	**12:40 PM**	**Lunch**		
Decision making in uncertainty	1:20 PM	Sam Mazaheri and Dean Morison	Beta International Associates	Prioritising Asset Defects in Transportation Infrastructure Using a Relative Risk Model
	1:40 PM	Rob Heywood and Peter Shaw	FMA	Heavy vehicles, bridge monitoring and risk informed decision making
Break	**2:40 PM**	**Afternoon tea**		

	3:00 PM	Maryam Nasim, Abbas Rajabifard, David Baily and Raphael Woon	Melbourne University & Sterling	Digital Twin Structural Health Monitoring Railway Aged Bridge
Industrialising Analysis	3:20 PM	Jeyamohan Kunaratnam, Tommy H.T. Chan, Khac-Duy Nguyen, David P. Thambiratnam and Xinqun Zhu	QUT	Advanced Techniques for Prestress and Moving Force Identification in Continuously Supported Prestressed Concrete Bridges
	3:40	Rhys Young	Leap Australia	Practical uses of the cutting-edge digital twin technologies and their limitations
	4:00 PM 4:20 PM	Jianchun Li	UTS	Rethink of Structural Health Monitoring in the AI Era: A Personal Perspective
ABM	4:25 PM	**Advisory Board Meeting**		
Networking	6:30 PM	**Conference Dinner** Newcastle Cruising Yacht Club (upstairs) 95 Hannell St, Wickham		



The 17TH Australian Network of Structural Health Monitoring Workshop

Q Building, University of Newcastle

16B Honeysuckle Drive

Day 2, Friday 21st of November

Topic	Start Time	Speaker	Affiliation	Topic
Welcome Address	9:00 AM	John Vazey	EngAnalysis	Welcome & Logistics
Research Advances	9:10 AM	Colin Caprani	Monash University	Monitoring the Cracks in SHM's Credibility: From Damage Detection Myths to Load Measurement Value
	9:40 AM	Igor Chaves, Mark Masia, Paul da Costa, Chee Yin Lam, Lyndsey Terry and Md Akhtar Hossain	UoN	A Non-Destructive Method for Estimating Resilience of Aging Masonry Veneer and Cavity Walls
	10:00 AM	Huiyue Qiao, Hong Guan and Yong Zhu	Grifith University	IoT-based wireless sensor network for footbridge vibration monitoring
	10:20 AM	Maryam Nasim, Abbas Rajabifard, David Baily and Raphael Woon	Melbourne University	Digital Twin Structural Health Monitoring Railway Aged Bridge
	10:40 AM	Jun Li	Curtin University	Drive-by techniques for structural health monitoring of bridges
Break	**11:00 AM**			**Morning tea**
AI and the leading edge of academia	11:30 AM	Christian Ebel and Stewart Wood	NVMS	Integration and comparison of three different technologies to measure vibrations
	11:50 AM	Mohammad Siahkouhi, Maria Rashidi and Fidelis Mashiri	WSU	Bridge monitoring using innovative self-sensing concrete sensors; An experimental study
	12:10 PM	Sahar Hassani and Ulrike Dackermann	UNSW	Resilient Asset Management of Transportation Infrastructures: Unpaired CycleGANs for Missing Data Recovery and Future Response Forecasting under Unseen Scenarios
	12:30 PM	Zihao Liu, Daniel Dias Costa, Mohsen Ebrahimzadeh Hassanabadi, Raj Das and Mehri Makki Alamdari	UNSW	Universal virtual sensing methods for system identification and structural health monitoring
Break	**12:50 PM**			**Lunch (And the AGM)**

AGM	1:10 PM	Tommy Chan	**ANSHM Annual General Meeting**	
Student Presentations	1:50 PM	**Panel Discussion:** What model of industry and academic collaboration do we want? Ulrike Dackermann, Maria Rashidi		
	2:20 PM	Avish Singh, Lei Hou, Kevin Zhang and Nic Bao	RMIT	Advancements in Structural Health Monitoring through Robotics
	2:40 PM	Vahid Mousavi and Maria Rashidi	WSU	An AI-Enabled Digital Twin Model for Real-time Bridge Health Monitoring
Break	**3:00 PM**		**Afternoon tea**	
Student Presentations	3:20 PM	Ashok Kumar Reddy Kuturla	Depaul University	Artificial Intelligence in Structural Health Monitoring: Deep Learning Innovations for Predictive Infrastructure Maintenance
	3:40 PM	Ali Haidar and Andy Nguyen	USQ	Characterising Monitoring Data of a Hunter Valley Rail Bridge
	4:00 PM	Mingyang Ren, Yingjie Wu, Yancheng Li, Arnaud Castel, Karen Thompson, Peter Sleep and Jianchun Li	UTS	Deep learning computer vision for crack quantification in concrete pipelines
	4:20 PM	Ahmed Aseem	ArcStructural	Numerical study for Full Strength Butt Weld Evaluation in Mild Steel T-Plate using nonlinear guided waves
Conference Close	4:40 PM	Henry Griscti	EngAnalysis	Session Close

All speakers have been primed to deliver some valuable insight. To me this is the most important aspect of SHM: that it informs and facilitates better decisions.

This is an interactive event: you will be expected to respectfully listen to the presentation then join in on the discussions that follow. The program has a series of interactive sessions to facilitate this approach.

Please send any suggestions, edits or modifications to ANSHM2025@enganalysis.com.au

For venue details, maps, accommodation suggestions and background to the event please try the website at

http://www.17ANSHM2025.com.au

This program is the first draft and may change subject to change.