



The 15th Australian Network of Structural Health Monitoring Workshop & The Smart Infrastructure Summit 2023

Townsville, 23-24 November 2023

Infrastructure Digitisation for Net Zero Transition

23rd November: The Smart Infrastructure Summit 2023, The Banquet Centre Townsville City

24th November: The 15th Australian Network of Structural Health Monitoring Workshop, James Cook University, Douglas Campus.

Keynote Speakers

Asset Monitoring in the Context of a Net Zero Future

Dr Govinda Pandey, CEO Rockfield

Opening Remarks

Cr Jenny Hill, Mayor of Townsville City Council

JCU's Net Zero Research

Prof Jenny Seddon, Deputy Vice Chancellor Research – James Cook University

ANSHM Vision, Journey and Future Directions

Prof Tommy Chan, Queensland University of Technology – President, Australian Network of Structural Health Monitoring

Innovations from North Queensland and the Future of Technology

Prof Ian Atkinson, eResearch – James Cook University and a Futurist

The confluence of Transport, Energy and Technology – Shaping Our Transport Future

Mr Michael Caltabiano, CEO – Australia Road Research Board

Digitisation and the Energy Transition

Mr Jason Hall, General Manager, Grid Technology – Energy Queensland

Smart City Technologies for Climate Resilience

Mr Ross O'Toole, Head of Real Estate Technology – Optus Enterprise and Business

Sustainability of the Transport Assets and the Role of Technology

Dr Torill Pape, Director (Structures Design, Review and Standards), Queensland Department of Transport and Main Roads

Building to the Code does not get us Resilient Structures

Dr David Henderson, Chief Engineer, Cyclone Testing Station, James Cook University

Challenges in Managing Port Assets and PIANC's Initiatives in Leveraging Technology

Dr Sam Mazaheri, Chair Northern Chapter PIANC ANZ and Structural Integrity Specialist – Dalrymple Bay Coal Terminal

Structural Health Monitoring of Large Scale Bridges – An International Perspective

Prof Yi-Qing Ni, Prof In Smart Structures – The Hong Kong Polytechnic University

Structural Health Monitoring in Australia – Challenges, Opportunities and Future Directions

Mr John Vazey, Engineering Manager – EngAnalysis

Structural Health Monitoring in the United States and Europe

Dr Arash Behnia, Principal – Robert Bird Group

University, Industry and Government Collaborations

Prof Tuan Ngo, The University of Melbourne

Dynamic Assessment of Large Infrastructure

Dr David Lo Jacono, Technical Director – Jacobs

Monitoring of Critical Transport Assets

Dr Desiree Nortje, Principal Asset Manager – Civil Structures, Transurban

Practical Monitoring for Superload Transports

A/Prof Colin Caprani, Monash University

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Register at <https://www.trybooking.com/CLTSJ> or www.anshm.org.au
For further information: 15ANSHM2023@gmail.com



The 15th Australian Network of Structural Health Monitoring Workshop & The Smart Infrastructure Summit 2023

Townsville, 23-24 November 2023

Infrastructure Digitisation for Net Zero Transition

ANSHM (Australian Network of Structural Health Monitoring) was formed in 2009 to raise awareness of and build collaborations for the application of Structural Health Monitoring (SHM) in Australia. ANSHM comprise of all major national universities, road/rail authorities, engineering advisory and technology companies across Australia and New Zealand.

Structural Health Monitoring Workshop Topics

Mobile Crowdsensing and IoT sensing techniques for drive-by bridge condition monitoring.

A dual-sensor technique for the calibration of frequency-dependent wave speed and attenuation in water pipes.

Spatial Positioning in the SHM World.

Development of IoT-based SHM system prototype for footbridge vibration monitoring using LoRa technique.

Development of Fiber Bragg Gratings Sensors for Reinforcement Corrosion Detection in Structural Health Monitoring.

Significance of Economic Framework in Maintenance Decision-Making.

Asset Condition Monitoring using operational data from SCADA systems.

Application of Topological Data Analysis for Bridge Health Monitoring.

Nonlinear vibration control of offshore wind turbines under multiple dynamic hazards.

A Framework for Structural Damage Detection based on SAP2000-OAPI and Nature Inspired Optimisers.

Next-generation coupled structure-human sensing for pedestrian-bridge interaction analysis using data fusion and machine learning.

Asset Management of Berth Ship loader Rail Girders via Online Monitoring System.

Dynamic assessment of large infrastructure.

Crack identification in beams by a novel modal-based correlation method.

Structural Condition Assessment based on Knowledge Transfer.

Automated Stormwater infrastructure inspection leveraging deep learning or Convolutional Neural Network.

UAS-Based Multi Layered Data Collection Methods and Defect Detection Algorithms for Predictive Analytics and Bridge Asset Management.

A Low-Cost Vibration Sensor for Structural Health Monitoring of Bridges.

Low-Cost Water Level Gauging for Flood Impact Analysis.

Tunnel Displacement Monitoring using Battery-Powered Wireless Radar Sensors.

Bridge and Traffic Monitoring (BTM) of the Gateway Arterial Flyover

Townsville is a wonderful place to visit. For details on what to do and accommodation options please visit www.townsvillenorthqueensland.com.au. Details on hotels offering discounted rates will be advised upon confirmation of your registration.

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