

# 12<sup>th</sup> ANSHM Workshop Programme (all times are shown in AEST (Brisbane))

Please remember to switch between the following two URLs:

**URL for Opening & Session 1 & Session 2 & Session 3 & Session 4 & Session 5**

<https://qut.zoom.us/j/84569560687?pwd=U2R5M1ZtRG9acnBiWmwvODhzRm52QT09> (Password: 101113)

**URL for Group photos & Industry Workshop & Advisory Board Meeting (ABM) & Annual General Meeting (AGM) & Industry Forum & Closing**

<https://qut.zoom.us/j/86757484885?pwd=Z2dXaTYreVZ0SW9TSTRFU2dJZ2pYQT09> (Password: 208471)

Time	Monday, 7 December 2020	Tuesday, 8 December 2020
9:00-9:10am	<b>Opening</b>	
9:10-10:30am	<p><b>Session 1: Bridge Structural Health Monitoring (15+5 mins per presentation; Session Chair: Prof Jianchun Li)</b></p> <ol style="list-style-type: none"> <li>1. “Structural Health Monitoring of Buildings and Bridges – Research at QUT: From Theory to Application and Implementation – Part I” – Prof Tommy H.T. Chan &amp; Prof David P. Thambiratnam &amp; Dr Khac-Duy Nguyen, etc., Queensland University of Technology</li> <li>2. “Structural Health Monitoring of Buildings and Bridges – Research at QUT: From Theory to Application and Implementation – Part II” – Prof Tommy H.T. Chan &amp; Prof David P. Thambiratnam &amp; Dr Khac-Duy Nguyen, etc., Queensland University of Technology</li> <li>3. “Assessing the performance of alkali silica reaction (ASR) affected structures: modelling and monitoring” – Prof Jianchun Li, University of Technology Sydney</li> <li>4. “The SPIR: An Autonomous Underwater Robot for Bridge Pile Cleaning and Condition Assessment” – Dr Andrew To &amp; Prof Dikai Liu, University of Technology Sydney</li> </ol>	<p><b>Session 3: Non-destructive Techniques (15+5 mins per presentation; Session Chair: Prof Tuan Ngo)</b></p> <ol style="list-style-type: none"> <li>1. “Vision-based automated crack detection using convolutional neural networks for condition assessment of infrastructure” – Prof Tuan Ngo &amp; Dr Tuan Nguyen   University of Melbourne</li> <li>2. “The Use of Electron Migration Media as Moisture Sensor for Building Structure Health Monitoring” – Kenneth PAK C.W &amp; Professor Jie Li, RMIT</li> <li>3. “Creation of a digital twin for intelligent maintenance of port infrastructure” – Dr Mojtaba Mahmoodian &amp; Prof Sujeeva Setunge &amp; Prof Kevin Zhang, RMIT; Dr Said Mazaheri, Beta International Associates</li> <li>4. “A Structural Health Monitoring System for the Sir Leo Hielscher Bridge” – Ben Itzstein &amp; Nguyen Lu Dang Khoa &amp; Filippo Ammazalorso &amp; Huy Pham &amp; Raghav Chalapathy &amp; Dilusha Weeraddana &amp; Chen Cai, CSIRO; Dr Mehrisadat Makki Alamdari, UNSW</li> </ol>
10:30-11:00am	Break	Break
11:00-12:20pm	<p><b>Session 2: Data-driven Structural Health Monitoring (15+5 mins per presentation; Session Chair: Prof Tommy Chan)</b></p> <ol style="list-style-type: none"> <li>1. “Image-based 3D Vibration Measurement for Structural Health Monitoring” – Prof Hong Hao, Curtin Uni</li> <li>2. “AI-Assisted Structural Health Monitoring” – A/Prof Jun Li &amp; Prof Hong Hao &amp; Ruhua Wang &amp; Gao Fan &amp; Ling Li &amp; Senjian An &amp; Wanquan Liu, Curtin Uni</li> <li>3. “Visual-based structural health monitoring of bridge structures” – Dr Ali Hadigheh &amp; Prof Brian Uy &amp; Prof Wije Ariyaratne, The University of Sydney</li> <li>4. “Investigation of effectiveness of crack detection using non-contact measurements and deep learning techniques” – Dr Andy Nguyen &amp; R.R. Chianese &amp; Thiru Aravinthan &amp; Allan Manalo, University of Southern Queensland; V.R. Gharehbaghi, Kharazmi University; Mohammad Noori, California Polytechnic State University</li> </ol>	<p>11:00-11:40am <b>Annual General Meeting (AGM)</b></p> <p>11:40-12:20pm <b>Session 4: Big Data Analytics for Structural Health Monitoring (15+5 mins per presentation; Session Chair: Prof Hong Guan)</b></p> <ol style="list-style-type: none"> <li>1. “Finite Element Model Updating of a Cable-Stayed Bridge Using Structural Health Monitoring Data” – Thomas Sharry &amp; Hong Guan &amp; Erwin Oh, Griffith University; Hoang Nam, Ho Chi Minh City University of Technology; Andy Nguyen, University of Southern Queensland</li> <li>2. “Evaluation of Cross Laminated Timber Panels Non-destructively: Experimental and Numerical Study” – Adam Faircloth, Salisbury Research Facility Qld; Loic Brancheriau, CIRAD France; Hassan Karampour &amp; Stephen So, Griffith University; Henri Bailleres, Hyne Timbers &amp; Son Qld; Chandan Kumar, Salisbury Research Facility Qld</li> </ol>
12:20-12:30pm	<b>Group Photos</b>	Break

12:30-1:20pm	Break			
1:20-2:40pm	<b>Industry Workshop: Structural Health Monitoring Practices (Facilitated by John Vazey)</b> <ol style="list-style-type: none"> <li>1. Opening Speech (John Vazey, EngAnalysis)</li> <li>2. "Corrosion Monitoring on Concrete Structures - New and Old" – William Ward, PCTE</li> <li>3. "Iris CM™ from RDI Technologies Opens Up the World of Motion Amplification to Structural Health Monitoring" –Andrew Gale, Optical Motion Technologies</li> <li>4. "FiBridge: Digital asset management enabled by low-cost fiber-optic sensing and advanced analytics" – Dr Ajay Raghavan, Xerox; Dusan Stojkovic, VicTrack</li> </ol>		<b>Session 5: Advanced Sensing Technology (15+5 mins per presentation; Session Chair: A/Prof Xinqun Zhu)</b> <ol style="list-style-type: none"> <li>1. "Pipe Break Early Warning through Structural Health Monitoring in Adelaide Smart Water Network" – Dr Jinzhe (James) Gong, Deakin University</li> <li>2. "Data Management and Dashboard Development for "Living Laboratories" Enabling Structural Health Monitoring" – Zane Keeley &amp; David Rowlands &amp; Sanam Aghdamy, Griffith University; Simon Kaplan &amp; Rob Cook, the Urban Institute</li> <li>3. "Use of guided waves for evaluating corrosion damage on one-side water-immersed metallic plates" – Xianwen Hu &amp; A/Prof Alex Ng, The University of Adelaide</li> </ol>	
2:40-3:00pm	Break		Break	
3:00-5:00pm	<b>Advisory Board Meeting (ABM)</b>		3:00-4:30pm	<b>Industry Forum (Facilitated by A/Prof Colin Caprani &amp; Govinda Pandey &amp; John Vazey)</b> <p style="text-align: center;">Special presentations before the forum discussion</p> <ol style="list-style-type: none"> <li>1. "What is the value of SHM?" – A/Prof Colin Caprani &amp; Dr Shaohua Zhang &amp; M. Shihab Khan, Monash University</li> <li>2. "InfraTech: SHM and Beyond?" – Govinda Pandey, Rockfield</li> </ol>
			4:30-4:40pm	<b>Closing</b>