



UNSW
SYDNEY



Structural Health Monitoring

CIES is internationally renowned for excellence in experimental, theoretical and applied research. Our aim is to make infrastructure safer, more reliable, sustainable, and cost effective. Our structural health monitoring research, led by award winning scholar Dr Mehri Makki Alamdari, spans across structural health monitoring, vibration analysis and testing, inverse dynamic problems and signal processing.

Competitive advantage

- Long history of working successfully with industry partners
- Our award-winning researchers are recognised globally as leaders in their field
- We offer a new direction for sustainable monitoring of ageing infrastructure

Impact

We aim to develop a low-cost and robust bridge monitoring framework by advanced data analytics, solely based on the response of a moving vehicle passing over the bridge, with no equipment to be installed on the bridge - resulting in lower costs of maintenance, enhanced safety and extended asset life.

Successful applications

Our researchers have worked on projects such as:

- Data61|CSIRO work on structural health monitoring of the Sydney Harbour Bridge
- Design and development of an advanced sensing and data platform to monitor the iconic Sir Leo Hielscher Bridge (the Gateway Bridge) in Brisbane in real time. The platform uses machine learning techniques to detect damage before it can affect public safety. This project was a winner in the Intelligent Transport Systems (ITS) Australia National Awards for 2020

Capabilities and facilities

Dr Makki Alamdari is on the Executive of the Australian Network of Structural Health Monitoring (ANSHM), and a member of The International Society for Structural Health Monitoring of Intelligent Infrastructure (ISHMII).

Our partners

- CSIRO
- Transurban

More Information

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