



Protection of Infrastructure & Buildings in Cyclone Prone Regions



This event will provide fundamental knowledge about the cyclone threat and structure safety, and give examples of typical examinations on different structural performances.

Economic loss from cyclones in Australia are significantly higher than those from other nature hazards. The majority of these losses are caused by damage to infrastructure and buildings. Design codes such as Australian Standards AS1170.2 impose mandatory design requirement for structures in cyclone prone regions.

As a result of climate change, steady increases in severe wind intensity and frequency have been recorded in Australia, which makes it more and more likely that buildings and infrastructure will experience extreme wind loading during their life. During strong wind, debris from broken trees, roof tiles, and other loose objects can be propelled at high speeds towards structures, which creates significant threats to the safety of both structures and residents. Therefore, it is important to properly assess the vulnerability of structures in cyclone prone regions and develop effective and efficient mitigation and strength measures.

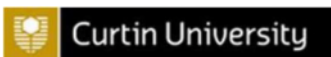
When

Thursday, 21 October 2021
4.30 pm – 6.30 pm

Where

[Collab Space, Curtin University](#)
Innovation Central Perth
Level 2, Building 216
Kent Street
Bentley WA 6102

[Register now!](#)



Event program

4.30 pm	Opening	WA President, Engineers Australia - Brian Haggerty
4.35 pm	EP program introduction	Innovation Connections Facilitator - Sue Robson
4.40 pm	Keynote Speaker	Senior Research Fellow - Dr Xihong Zhang
5.00 pm	Q&A	
5.10 pm	Demo impact test & Structural Laboratory tour	Structural Lab and Structural Dynamics Lab
5.40 pm	Networking	Innovation Central Perth

About the speaker – Dr Xihong Zhang

Dr Zhang is a senior research fellow at the Centre for Infrastructural Monitoring and Protection, Curtin University. He is an internationally renowned scholar who designs enhanced protection solutions for built infrastructure to improve protection against natural and man-made hazards. This includes development of advanced construction materials. Dr Zhang's research provides design methods devised for engineering practice, primarily for the construction and mining. Being a world-class expert in experimental and numerical studies in structural responses under dynamic loading at both macro- and micro-scale, Dr Zhang is a pioneer who elucidated the dynamic material properties of construction materials. His research on glass window vulnerabilities under windborne debris impact has established the theoretical background to make a thorough change of conventional case-by-case laboratory validation situation for windows to be used in cyclone prone regions such as the Pilbara region in Western Australia. Having designed and conducted extensive laboratory and field tests to quantify the vulnerability and design mitigation retrofits for different structural elements under different hazards, his research outcomes have filled the gap in WA engineering practice and been adopted by researchers/industries world-wide.

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Limited places

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For more information

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