



RISEN RESEARCH SEMINAR

(Rail Infrastructure Systems Engineering Network)

Thursday 20th September 2018, 11.00-12.00
Room NG 16 (1st FL.)
Gisbert Kapp Building (G8), UOB



Rehabilitation for Ageing Infrastructures through Innovative Retrofitting Method

Dr. Olivia Mirza, Senior Lecturer, School of Computing, Engineering and Mathematics, Western Sydney University, Australia, Chair for Engineers Australia Western Sydney Regional Group

ABSTRACT

Recent research shows that the percentage of infrastructures reaching their design life in the world has increased. Repairing and strengthening ageing infrastructure, especially bridges, to prolong service life and take increasing loads, is becoming an urgent need globally. Australia has more than 5000 bridges. More than 50% are 75 years old, and over 35% of Australia's bridges are more than 100 years old. According to Engineers Australia's latest Infrastructure Report Card, Australia also has approximately 20% are structurally deficient bridges that require consistent maintenance or rehabilitation to safely operate. These are the reason why ageing of infrastructures is a concern in Australia. When looking at the ageing infrastructures, the present condition and how to repair, replacement, retrofit and management improvement are paramount. The aim of this research is to use alternative structural solutions that can extend their design life and will improve the economy and the sustainability of these structures based on their condition assessment. In order to meet present and future demands regarding effective, reliable and safe bridges, it is important to upgrade the existing bridges and ensure that they will behave properly under increased loads and higher speeds.

ABOUT THE SPEAKER

Dr. Olivia Mirza was a Golden Jubilee Scholarship holder at UNSW in 2000. She graduated in Bachelor (Hon), Civil and Environmental in 2002. She worked as a structural engineer for 8 years before pursuing her academic career. She worked for Leighton Contractors, Australia Consulting Engineers and Cardno Group. Dr. Mirza currently is a senior lecturer in School of Computing, Engineering and Mathematics. She is also Academic Course Advisor for Postgraduate Fire Safety Engineering Program. She is currently the Chair for Engineers Australia Western Sydney Regional Group. Dr. Mirza is a strong advocate for encouraging more women into the engineering profession and is a mentor both for the University's WiSE program, Western Sydney University Science in Australia Gender Equity (SAGE) initiative group and for Engineers Australia's Women in Engineering mentoring program. She also actively promotes the University's Engineering program around regional NSW. Australia like most other countries in the world has a shortage of engineers and it is Olivia's vision to increase the number of women engineers. In 2016 she set up a group called "WoW" Women of Wisdom for Western Sydney University. WoW is to help with the retention of female student in Construction and Engineering field

*This seminar is open to all and refreshments are provided. For catering purpose, please RSVP to **Dr Sakdirat Kaewunruen** by email at s.kaewunruen@bham.ac.uk*



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