Real Time Web Based Bridge Health Monitoring System

Project Background

Our society has increasingly been under pressure from aging and declining infrastructure such as buildings and bridges. To ensure the safety and minimise the interruption to publics, development of a reliable and efficient Structural Health Monitoring System is essential. Based on a series of R/D projects undertaken over the past 3 years by UTS researchers, in collaboration with RTA and Institute of Public Works Engineering Australia (IPWEA), a new dynamic approach for integrity assessment of bridges has been successfully developed and implemented for more than 60 bridges.

We invite 4 enthusiastic and capable students (preferably 2 from IT background and 2 from civil/structural background) to join the research team to develop a prototype of Real Time Web Based Bridge Health Monitoring System.

Objectives

Through collaborative team efforts, you will be developing a prototype of Real Time Web Based Bridge Health Monitoring System capable of a self learning, self adjusting and decision making. Your tasks include:

- Information collection & categorization (e.g. material data, inspection information etc.)
- Develop simple statistic/probabilistic models for materials, loadings and degrading etc.
- Apply multilevel Decision Fusion models to produce a self learning system
- Mapping online information
- Develop a web prototype

Category: theoretical investigation, 12 CP 1 year, Grade Range: D-HD
software development, 12 CP 1 year, Grade Range: D-HD

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