

Weekly Research Seminar Series

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An Novelty Detection Based Condition Monitoring Method

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Abstract

Conventional monitoring of objects' condition relies on known cases of abnormal condition(s). The availability of these known cases is however not guaranteed, and in reality is often difficult to obtain such data. In this seminar, we review a novelty detection based monitoring technique that require only the normal condition data. The method is structured on the Kohonen's Self Organizing Map. Two case studies, one of each in Machine Condition Monitoring and Ovarian Cancer detection respectively, are presented. Detection results are compared with conventional classifier schemes. Besides, we also explored the generalization issue of the proposed method.

WHEN: 12th October 2005, (4:00 – 4:30PM)

WHERE: Room 4.07

About the Speaker

Dr. Wong received his BEng(Hons) Electronics & Communications from the University of Liverpool in 1999. Shortly after, he joined the Signal Processing & Communication (SPC) group of the same department as a Ph.D. Research student under the joint sponsorship of Overseas Research Students (ORS), U.K. and the University of Liverpool. In July 2004, he received his Ph.D. from the same University.

Dennis joined Swinburne University of Technology as a Lecturer in February 2004. His research Interests includes condition monitoring, novelty detection, modulation classification and digital watermarking.