Institute for Integrated and Intelligent Systems (IIIS) and School of Information and Communication Technology (ICT) is pleased to present the SEMINAR on

"Measuring Effectiveness of Testing in Embedded Systems"

Professor Paddy Krishnan

**Time** 10.00am  
**Date** 4th November 2010  
**Venue** G30_1.19 Gold Coast campus Griffith University.

**Abstract:** In this presentation we will discuss the results of various experiments conducted in the context of testing embedded systems in the automotive domain. The aim is to improve quality of the various control software that play a central part in automobiles. We examine the effectiveness of automatically generated unit tests, manual testing, random testing, specification based testing and a simple algorithm that combined unit tests to obtain system tests. Effectiveness was measured using mutation based testing. While there is no clear winner, the results demonstrates the impact of automatically generated unit tests.

**Bio:** Paddy Krishnan is a Professor of Computer Science and Head of Department of Software Systems at the School of Information Technology, Bond University. He is also the Director of the Centre for Software Assurance. He has been an Associate Research Fellow at the International Institute for Software Technology, United Nations University and has held visiting positions at Tata Consultancy Services (Research) and Siemens Research. He received his BTech from The Indian Institute of Technology-Kanpur and MS and PhD from the University of Michigan, Ann Arbor. He has held positions in the Denmark, Germany, India, New Zealand and the USA. His research interests are in the area of software engineering with a focus on formal methods, security, model-based testing, assurance and real-time systems.