Institute for Integrated and Intelligent Systems (IIIS) and School of Information and Communication Technology (ICT)

Is pleased to present the SEMINAR on

"Scalable Reasoning in the Semantic Web"

Dr Jeff Pan  Deputy Director of Research, University of Aberdeen

**Time**  10.00am - 12.00  
**Date**  Monday, 11 July 2011  
**Venue**  N34 0.04 Nathan campus Griffith University.

**Abstract:** In order to implement the Semantic Web vision, the World Wide Web Consortium (W3C) has a few standards that are related to reasoning, including RDF, OWL and SPARQL. Indeed, tractable reasoning over ontologies is one of the most useful and important services to support Semantic Web applications. The talk will begin with an introduction of the above standards, with examples to illustrate why they are needed for linked data and semantic web applications. As OWL plays a key role in Semantic Web reasoning, I will then introduce the new OWL2 standard and how to perform tractable reasoning in OWL2, by exploiting its tractable sub-languages such as OWL2-EL and OWL2-QL, as well as faithful approximate reasoning built on top of these sub-languages. If time allows, I could give a short demonstration of our TrOWL (Tractable reasoning for OWL2) reasoning infrastructure. I will conclude the talk with discussions on some of our relevant recent work and future steps.

**Bio:** Jeff Z. Pan received his Ph.D from University of Manchester in 2004. He is a Senior Lecturer in the Department of Computing Science at University of Aberdeen, where he is the Deputy Director of Research of the department and the coordinator of the Knowledge Technology group. He has over 100 referred publications and serves on the Editorial Board of the Journal of Web Semantics (JoWS, impact factor 3.4), the International Journal on Semantic Web and Information Systems (IJWSIS), and as program chair of RR2007 (The First International Conference on Web Reasoning and Rule Systems 2007), JIST 2011 (The First International Joint Semantic Technology Conference), ESWC2010 Ontology and Reasoning Track, ISWC2010 Doctoral Consortium and ESWC2011 Ph.D. Symposium. He is a key contributor to the W3C OWL2 standard. He leads the work of the TrOWL Tractable OWL2 reasoning infrastructure (http://trowl.eu/). He is widely recognised for his work on scalable and efficient ontology reasoning; he gave/will give tutorials on this topic also in e.g. AAAI2010, ESWC2010, the Reasoning Web Summer School 2010 and 2011, ESWC2011 and SemTech 2011.