



**Department of Mathematics, Statistics and Computer Science
St. Francis Xavier University
Presents**

Reasoning about Multi-Agent Systems

by

Dr. Ji Ruan

Post Doctoral Fellow

Centre for Logic and Research

St. Francis Xavier University

Wednesday, July 8th, 2009 @ 2:00pm in Annex 23a

Multi-Agent Systems (MASs) are an influential paradigm for understanding and building distributed computing systems, where it is assumed that the computational components are autonomous, i.e., able to control their own behaviour in achieving their own goals. In this talk, I will provide a logic-based account of the verification of MASs, in terms of time, action and knowledge. I will first introduce the research area of Multi-Agent Systems and the reasons of my focus on logic-based methods. Then I will explain several basic logic systems for reasoning about MASs, with motivational examples. Next, I will focus on a problem called the Sum-and-Product riddle and show you how to solve it using a logic-based method. Finally I will conclude the talk with a brief discussion on future research.

Refreshments will be served before the talk in AX24A