

Knowledge and Representation at Bath (KR&R@Bath) Seminar Day

Room 1W2.6

November 28th 2006

Schedule

13.15 - 14.00 : PROF. NORMAN FOO, UNIVERSITY OF NEW SOUTH
WALES

14.00 - 14.20 : JONTY NEEDHAM

14.20 - 14.40 : MARTIN BRAIN

14.40 - 15.00 : TOM CRICK

15.00 - 15.20 : TRISTAN CAULFIELD

15.20 - 14.40 : JAN DRUGOWITSCH

15.40 - 15.45 : RHYS EVANS

15.45 - 15.50 : ADREW STACEY

15.50 - 15.55 : ADRIAN SNELL

15.55 - 16.00 : TOM BROOK

16.00 - 16.05 : IAN SAUNDERS

Norman Foo

Title: Research Program on Social Agents

Abstract: The talk will be about a research program on social agents. I will provide some background on existing work on social agents, say something about game theory and social norms, and then explain our approach to modelling social agents in the framework of logic programs that are used as models of such agents. As negotiation is fundamental to interactions among social agents I will discuss one way to model the simplest negotiation as a kind of program revision akin to belief revision. The inadequacies of our current approach will be exposed, and a way forward will be discussed.

Jonty Needham

Title: A Games Semantics for Answer Set Programming item[Abstract:] Games models have proven to be very useful in capturing the intentional nature of logics and programming languages. The answer set semantics for logic programming have been widely used in artificial intelligence, classical game theory and agents for a number of years. In this talk we present a model for ASP using interaction 2 player logic games. We also outline some of the techniques gleaned from this semantics, and look at possible links to classical game theory.

Martin Brain

Title: Complete Propagate Operators for Answer Set Semantics

Abstract: A common strategy for computing answer sets is to propagate as much information as possible and then branch on an atom, trying to compute the answer sets when it is true and when it is false. In this talk we consider what it means for the propagate step to be complete, how this effects other search techniques such as lookahead, back jumping and clause learning and how a complete propagate operator might be created.

Tom Crick

Title: TOAST: v1 and beyond

Abstract: This presentation will give an introduction to the TOAST system and the current state-of-play w.r.t. development and results. Existing problems and future development will also be discussed.

Tristan Caulfield

Title: Using Jamming to Enforce Cooperation in Multi-Hop Wireless Networks
item[Abstract:] Devices participating in wireless networks often run from batter power, making lower power consumption desirable. In multi-hop networks, devices forward packets for each other, enabling communication between nodes that are too distant to communicate directly. Since every transmission uses power, nodes that wish to preserve battery life do not have any incentive to forward packets on behalf of others. We develop a model of a network that uses intentional jamming to enforce cooperation among nodes on the network. We show through simulation that attempted cheating results in higher power use and that cooperation is the optimal behaviour in this model

Jan Drugowitsch

Title: Reinforcement Learning with Independently Trained Local Models: Mixing Models with Confidence

Abstract: I will present Learning Classifier Systems (LCS) as a possible approach to avoid the curse of dimensionality in reinforcement learning. After introducing reinforcement learning and the curse of dimensionality, I will discuss the model formed by LCS and how it relates to reinforcement learning. Subsequently I will concentrate on how to combine a set of independently trained local models (the classifiers) to get a global model, and will describe how to

Rhys Evans: Generic Logic Agent Frameworks

Adrew Stacey:Modelling Institutions in ASP

Adrian Snell:A Planning Front-end for ASP

Tom Brook: Computing Mixed Strategy Nash Equilibria

Ian Saunders: Functions, Pointers and Pretty Pictures