YCCSA Seminar Series
Autumn 2016

An interdisciplinary seminar series hosted by the York Centre for Complex System Analysis aimed at researchers from all disciplines

Cognitive Learning using Evolutionary Computation

Associate Professor Will Browne

School of Engineering & Computer Science,
Victoria University, New Zealand

28 October 2016
Ron Cooke Hub, RCH/204 at 13:30

Abstract:

Artificial Cognitive Systems encompasses machine intelligence systems, such as robots, that interact with their environment. This talk will highlight research that enables such systems to learn and adapt to problems in their domain and in related domains. The symbolic evolutionary computation technique of Learning Classifier Systems (LCSs) was conceived 40 years ago as an artificial cognitive system. The work presented shows how LCSs can utilise building blocks of knowledge in heuristics ('if-then' rules) to transfer learnt knowledge from small to large scale problems in the same domain. Furthermore, the use of these rules enables functionality learned in sub-problems to be transferred to related problems. Results show that provided the human experimenter can set a rough curriculum for learning concepts, the underlying patterns/models in a problem domain can be learnt in an interpretable manner.

The seminar includes a refreshment break to fuel interdisciplinary discussion

Ron Cooke Hub is on Heslington East Campus – accessible by free bus services Nos. 66 and 44 running at frequent intervals from Heslington West.
The YCCSA Seminar room is on the second floor