

INVITATION TO RESEARCH SEMINAR

RMIT Platform Technologies Research Institute and the School of Computer Science & Information Technology Joint Seminar: Introduction to Evolutionary Game Theory presented by Professor Garrison Greenwood, Professor of Electrical and Computer Engineering at Portland State University, USA and Editor-in-Chief of the IEEE Transactions on Evolutionary Computation.

Date

Thursday 16 May 2013

Time

4:30 - 5:30 pm

Venue

RMIT City Campus, 12.07.02

RSVP:

platformtechnologies@rmit.edu.au

**About the presenter****Professor Garrison W. Greenwood**

received a PhD in electrical engineering from the University of Washington, Seattle. After spending more than a decade in industry designing multiprocessor embedded system hardware, he entered academia where he is now a Professor in the Department of Electrical and Computer Engineering at Portland State University, Portland, Oregon USA.

He is currently a visiting fellow at the University of New South Wales, Canberra Campus on the grounds of the Australian Defense Force Academy, ACT Australia.

Professor Greenwood has served as an organizing committee member for many international conferences and was the General Chair of the IEEE 2004 and 2008 Congress on Evolutionary Computation conferences.

From 2006 to 2009 he was the Vice-President of Conferences for the IEEE Computational Intelligence Society.

He currently serves as a member of the IEEE Computational Intelligence Society's Games Technical Committee and the Evolutionary Computation Technical Committee (which he chaired during 2004 and 2005). He is the current Editor-in-Chief of the IEEE Transactions on Evolutionary Computation.

Professor Greenwood is a member of the Tau Beta Pi Engineering Honor Society, the Eta Kappa Nu Electrical Engineering Honor Society and is a registered professional engineer in the State of California USA.

His research interests are evolutionary game theory, agent-based systems and evolvable/adaptive hardware. Professor Greenwood is the co-author of the book Introduction to Evolvable Hardware: A Practical Guide for Designing Self-Adaptive Systems, Wiley-IEEE Press, 2006.

About the presentation

Many biological, social and economic processes are naturally modelled as a system of interacting individuals.

Game theory provides a natural framework for capturing behaviour in such systems. In particular, public goods games and the iterated prisoner's dilemma game have been widely used to study one of the great open questions in nature: how does cooperation grow in populations?

This talk provides an introduction to evolutionary game theory, which combines the principles of evolution with game theory to see how cooperative behaviour might evolve in populations.

Both infinite and finite population sizes are considered in the talk. A survey of the recent work in this area is presented along with a critique on what has been accomplished and where future research efforts should concentrate.