INVITATION TO DISTINGUISHED LECTURE

Distinguished Lecture hosted by Platform Technologies Research Institute and the School of Computer Science and Information Technology: From Ensemble Learning to Learning in the Model Space presented by Professor Xin Yao, Chair (Professor) of Computer Science at the University of Birmingham, UK, and President of IEEE Computational Intelligence Society

Date: **Friday 12 December 2014**

Time: **3:00pm - 4:00pm (afternoon tea provided)**

Venue: **RMIT Kaleide Theatre,**
360 Swanston St, Melbourne VIC 3000

RSVP: **ptri@rmit.edu.au**

About the presenter

Professor Xin Yao has been Chair (Professor) of Computer Science at the University of Birmingham, United Kingdom, since April 1999.

He is a Fellow of IEEE and currently holds the position of President of the IEEE Computational Intelligence Society (2014-2015).

His major research interests include evolutionary computation, ensemble learning, and their applications.

Awards Professor Yao has received include the 2001 IEEE Donald G. Fink Prize Paper Award, 2010 IEEE Transactions on Evolutionary Computation Outstanding Paper Award, 2010 BT Gordon Radley Award for Best Author of Innovation (Finalist), 2011 IEEE Transactions on Neural Networks Outstanding Paper Award.

He received the prestigious Royal Society Wolfson Research Merit Award in 2012 and the IEEE CIS Evolutionary Computation Pioneer Award in 2013.

About the presentation

Designing a monolithic system for a large and complex learning task is hard.

Divide-and-conquer is a common strategy in tackling such large and complex problems.

Ensembles can be regarded an automatic approach towards automatic divide-and-conquer. Many ensemble methods, including boosting, bagging, negative correlation etc;have been used in machine learning and data mining for many years.

This talk will describe three examples of ensemble methods i.e., multi-objective learning, online learning with concept drift, and multi-class imbalance learning.

Given the important role of diversity in ensemble methods, some discussions and analysis will be given to gain a better understanding of how and when diversity may help ensemble learning.

Towards the end of the talk, a new learning framework - learning in the model space is introduced.

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