Tuesday 8 April 2014  
12:30pm – 2:00pm  
Oceans Institute Seminar Room G.05,  
cnr Fairway and Edward Streets

Speakers

Professor Rachel Cardell-Oliver

Rachel Cardell-Oliver is a professor in the School of Computer Science and Software Engineering at UWA. Her research interests are computing education, wireless sensor networks and data mining for environmental applications such as water metering, bushland monitoring and smart homes.

Presentation: ‘How students experience learning to program’

This study seeks to understand how students experience learning computer programming, and the implications of those experiences for the quality of their learning. In order to identify the essence of the experiences, different types of artefacts produced by students during teaching are analysed including program code, programming assignment demonstration interviews, course feedback surveys, emails, and comments scribbled on exam papers. The main contribution of this paper is the description, using narratives, of four distinct student experiences of a first programming course: thriving, surviving, drowning and lost. Each narrative shows a unique combination of effective and ineffective learning behaviours.

Assistant Professor Nazim Khan

Nazim took up a position as Tutor in the School of Electrical and Electronic Engineering, here at UWA from 1986-1989 and also completed a BSc (hons) in Mathematics and Statistics. Nazim completed his PhD in statistics in 2004. He has worked in several universities in Brisbane between 2002 and 2003 before returning to UWA in 2004 as Consultant/Lecturer. Nazim is very active in statistical consulting and has delivered several short courses in statistics to various research groups and postgraduate students. His research is in biology, medicine, life sciences, engineering, and teaching and learning. He also runs a programme on achieving excellence.

Presentation: ‘Identifying threshold concepts in first year business statistics’

Every discipline has some fundamental concepts that form the framework on which the discipline is built. Discipline experts will identify some of these as threshold concepts. An understanding of threshold concepts is expected to provide an insight into the discipline and enhance learning. In this paper I will investigate threshold concepts for first-year business statistics, which is a compulsory unit for all business students at The University of Western Australia. The investigation will be based on analysis of examination scripts. As this is an initial investigation, I will focus on isolating threshold concepts based on one examination question.

Professor Melinda Hodkiewicz

Professor Melinda Hodkiewicz teaches the risk, reliability and safety unit (GENG5507) in the Master of Professional Engineering program at UWA and is part of the new Centre for Safety at UWA.
After working for a decade in operations and maintenance roles in the mining industry, Melinda joined the academic staff at UWA but retains close contact with her industry roots. She heads the Asset Management (AM) Program at the UWA and sits on the ISO (International Standards Organisation) committee for Asset Management Standards. In 2011 she was a finalist in the CME (Chamber of Minerals and Energy) Outstanding Women in Resources award and in 2012 won the UWA Safety Leadership Award.

**Presentation: ‘Insights gained from analysis of performance and participation in a flipped classroom’**

A flipped classroom uses technology to move lectures outside the classroom reserving the time inside the classroom for learning activities that connect concepts with practice. Much of the research on flipped learning has concentrated on comparing educational outcomes between flipped and traditional classroom environments. There has been limited work looking at student behaviours in a flipped learning environment and the extent to which students actually prepare for the face to face workshop experience as anticipated in the flipped learning model.

This presentation examines the relationship between performance and participation in a flipped learning class. It looks are whether students look at the lecture material prior to class, how much effort is put into the pre-workshop quizzes and the relationship between participation in these pre-workshop activities and performance in the unit. The class is for 407 final year bachelor in the subject of Risk, Reliability and Safety. Prof Roberto Togneri received the B.E. degree in 1985, and the Ph.D degree in 1989 both from the University of Western Australia. He joined the School of Electrical, Electronic and Computer Engineering at The University of Western Australia in 1988, where he is now currently a Professor.

**Professor Roberto Togneri**

Professor Togneri joined the School of Electrical, Electronic and Computer Engineering at the University of Western Australia in 1988.

Professor Togneri is a member of the Signals and Systems Engineering Research Group and heads the Signal and Information Processing Lab. He has published over 100 refereed journal and conference papers in the areas of signals and information systems, was the chief investigator on two Australian Research Council Discovery Project research grants from 2010 to 2013, and is currently an Associate Editor for IEEE Signal Processing Magazine Lecture Notes and Editor for IEEE Transactions on Speech, Audio and Language Processing.

Prof Togneri is currently a regular reviewer for the IEEE Transactions on Education. He has published a book chapter on “Strategies of Attracting Under-graduate Students into an Electrical Engineering Programme” and a conference paper on “Student Driven Course Development A Case Study in Communications Engineering” and is a regular participant on various education research and teaching and learning workshops and presentations.

**Presentation : ‘Assessment for Learning and Teaching’**

Assessment is an integral component of any unit. Its main purpose is usually for ranking students and determining pass or fail. But is that all we can do with assessment? In this presentation the idea of assessment for learning will be discussed where experimental activities are designed to facilitate and provide a vehicle to a better motivation in the self learning of theoretical and mathematical concepts in the context of the MPE Signal Processing unit ELEC4404. We will then follow this with assessment for teaching where assessment can be designed to facilitate teacher understanding of what students are misunderstanding and provide an example of the use of multiple choice quizzes a means to do this in the context of the Foundation Energy unit ENSC2002. Promising avenues for future education research design for assessment for learning and assessment for teaching as the next step will be highlighted.

**Notes for participants**

RSVP:
Please register your attendance to Megan Inpen at fase-ecm@uwa.edu.au by Friday 4 April 2014.

There will be a light lunch, refreshments and an opportunity to network informally from 12.30pm followed by the presentations.