Festival of Learning Showcase

Facilitator(s): Dr Johannes Herrmann, Lecturer, Department of Computing

Strategic theme: Leading in innovative education

Subject Title: From Trash to Treasure: Making a Theoretical Computing Unit Interactive and Relevant to Students

Contact Details: E-mail: Hannes.herrmann@curtin.edu.au  Phone: x3309 or 0433 060 760

Brief Description:

The unit Theoretical Foundations of Computer Science had the misfortune for being very difficult, extremely theoretical (mostly formal mathematical proof), requiring hard work and discipline from the students and also being seen as irrelevant to their future careers. Over the course of three years the unit has been iteratively improved to include online tools designed by students for students and given a direct alignment with the students’ future careers. Along the way assessments have been aligned closely with the learning structure, new technologies have been applied to learning and the classroom has been flipped. Not everything has worked, but student enthusiasm has increased and many hurdles have been overcome.

Reciprocal peer evaluation and department research have led to further changes being planned this year, including demonstration videos, the removal of the final exam and the introduction of a work portfolio.

This short discussion covers some of the challenges inherent in tackling an unpopular, difficult and theoretical unit as well as some of the techniques that have been used to address them. The session will end in time for a discussion on these approaches and (hopefully) some input from the audience on similar units in other areas. In particular I’m keen to hear from staff who teach very theoretical units and students who have ideas on improving them.

Benefits: Ideas about dealing with technical units where normal assessment may not be appropriate.

Time/Day: Wednesday 18 March 2015, 2:00 – 2:30pm

Duration: 30 mins – 15-20 minute talk with discussion following

No. of Sessions: One

Venue: Building 303:Room 222

Special Requirements: No special requirements needed