



Industrial & Applied Mathematics & The School of Mathematics & Statistics

Professor Zbigniew Michalewicz

You are invited to a

**presentation by
Prof. Zbigniew Michalewicz
University of Adelaide.
School of Computer Science**

Date: 22 August 2008

Time: 1200—1300hrs

**Venue: Building Q1-01,
Mawson Lakes Campus**

Biography:



Zbigniew Michalewicz is a Professor in the University of Adelaide's School of Computer Science. He has over 30 years of academic and industry experience and has published 15 books on predictive data mining and logistics optimisation—including the recent /Adaptive Business Intelligence,/ and earlier /How to Solve It: Modern Heuristics. He has special interest in teaching methodologies. In particular, he has been collecting interesting puzzles for over 40 years, and very often these puzzles are being used in his lectures to illustrate some important points. He took these ideas further and has just introduced a new course for freshman students, which is based entirely on puzzles.

Puzzle-Based Learning

Abstract

The talk addresses a gap in the educational curriculum for 1st year students by proposing a new course that aims at getting students to think about how to frame and solve unstructured problems. The idea is to increase the student's mathematical awareness and problem-solving skills by discussing a variety of puzzles. The talk makes an argument that this approach – called Puzzle-Based Learning – is very beneficial for introducing mathematics, critical thinking, and problem-solving skills.

The new course has been approved by the University of Adelaide for Faculty of Engineering, Computer Science, and Mathematics. Many other universities are in the process of introducing such a course. The course will be offered in two versions: (a) full-semester course and (b) a unit within general course (e.g. *Introduction to Engineering*). All teaching materials (power point slides, assignments, etc.) are being prepared. The new textbook (*Puzzle-Based Learning: Introduction to Critical Thinking, Mathematics, and Problem Solving*) is available from June 2008. The talk provides additional information on this development.

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