Editorial Introduction

Times Higher Education (THE) Awards 2010

Now in their sixth year, the Times Higher Education Awards are a highlight of the academic calendar and a glittering celebration of the best of the sector.

The awards represent a unique and high profile opportunity to celebrate the excellence and amazing achievements of UK higher education institutions, and reaffirm our commitment to the two core pursuits of higher education: teaching and research.

More details are available at:

In 2010, two members of the UK maths-related higher education community have been nominated in the “Most Innovative Teacher of the Year” category. We would like to congratulate both Carol Robinson (Loughborough University) and Tony Mann (University of Greenwich) on being shortlisted in this category. All THE Awards 2010 winners were announced at the awards ceremony on 25 November 2010.

Most Innovative Teacher of the Year

This award seeks to reward the academic whose imagination and passion have transformed a course and inspired students. It is open to academics in all UK higher education institutions.

In outline, nominees will need to explain:

- How they evaluate and develop their own professional progress with regard to teaching; and,

- How their engagement with students impacted positively in and beyond their academic role? [Including any effect beyond their institution.]

Judges looked for evidence of sustained commitment to advancing and positively influencing the student experience.

In this issue we carry a short piece outlining Carol Robinson’s work. We hope to carry a similar piece from Tony Mann in a later issue of MSOR Connections.
Dr Carol Robinson, Director of the Mathematics Education Centre, has established a reputation for innovation and impact in engineering mathematics at Loughborough University which recruits many students with a passion for sport. Carol has tapped into this passion and has made sport integral to the teaching of mathematics. In her first year engineering mathematics module, students encounter topics such as the Duckworth-Lewis model for one-day cricket, modeling of the pulse-rate of long-distance runners, javelin throwing, lane-staggers on the athletics track and downhill skiing. Group projects and computer software enable inclusion of realistic problems and prepare students for final year projects and industry.

After just one year, the module pass rate increased from 55% to 94% and has continued at a very high level. Moreover the high standard of student projects is testament to the motivating effect that sports-based problems have engendered (see article on page 7 of this issue for more details).

The impact of this work has spread beyond Loughborough University. Many visitors have been inspired by the work. A BBC producer developed a short video on lane-staggers for teachers. An Irish visitor developed a series of themed worksheets based on mathematics in the Olympic Games. Carol was invited to co-chair the Institute of Mathematics and its Applications first International Conference on Mathematics in Sport.

Carol is also pioneering the use of Electronic Voting Systems (EVS), to enhance and catalyse student engagement during lectures [1]. EVS use has increased the likelihood of students participating and engaging in class: “with Carol’s lectures, like, because there’s always a question or something to do, everyone’s, like, alert and awake”. The two most important benefits of EVS, identified by students, related to feedback.

Recognising the importance of this conversational framework, Carol ran initial training sessions for staff. She was awarded a competitive internal Academic Practice Award in 2008 and set up a university-wide staff interest group (approximately 40 members). Such was the success that the Head of E-Learning plans to extend this model of staff development. In 2009 she was awarded funding from the sigma CETL to develop EVS resources for mathematics (http://mec.lboro.ac.uk/evs). These resources were launched at a national conference, organised by Carol, in March 2010.

Carol has an excellent record in an area of recognised difficulty (engineering mathematics). As well as demonstrating a record of successful innovation in her own teaching, she has made major contributions to the development of the practice of others, both internally and more widely.

Reference