

Editorial

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Welcome to this third issue of Volume 15 of *MSOR Connections*. As usual, this contains a varied mix of research articles, case studies, opinion pieces and resource reviews, all with very relevant and immediate applications to teaching in the MSOR subject area. These cover topics related to the mathematics A/AS level reforms, mathematics outreach, maths anxiety, motivating mature students to study mathematics and international mathematics competitions, but we also have some 'doodling', some 'knitting' and even some football!

We 'kick off' with two articles that focus on students' experience in pre-university mathematics. The first by Cronin, Shuilleabhain, Lewanowski-Breen and Kennedy, examines the impact of participating in a series of mathematics workshops called 'Maths Sparks' on secondary-school pupils' attitudes towards mathematics. This is then followed by a piece by Paul Glaister, which provides a detailed update of the current reforms to AS and A levels in Mathematics and Further Mathematics, with links to relevant sources of information and resources and asks "are you ready?".

Ending the 'first-half' of this issue is another pair of excellent articles that examine issues related to anxiety and motivation in the study of mathematics. First up are Marshall, Staddon, Wilson and Mann who discuss some of the strategies, implemented at the University of Sheffield, to reduce anxiety and engage students in the learning of university mathematics. The second, by Mulligan and Mac an Bhaird, focuses on challenges that mature students face in their mathematics education when studying for a pre-degree Certificate in Science at a university in Ireland.

Beginning the 'second half' of this issue is a pair of articles, which focus on classroom practice. The first of these, by McLoone, Kelly and NiShe, presents a novel multi-platform smart device-based student response system, called UniDoodle (a development of the electronic voting systems or 'clickers'). Nicola Reeve then follows this with a resource review of the 'knitr' package, for use with the R statistical programming environment. This illustrates how to 'knit' together R and LaTeX code, so that the R code and output and the narrative are all included in one source document to make the process of producing course materials for teaching statistics with R very efficient indeed.

Bringing us towards the 'final whistle' is an article by Phil Scarf who shares with us 30 years of final year projects in Mathematics, Statistics and Operational Research, with numerous ideas for using sport as the basis for such projects. The 'close of play' and 'post-match interview' is then provided by the final article of this issue where we find out that Wang and Xu and a group of students at Coventry University are the eventual winners, as they share their experience with us of taking part in a multi-day international mathematics competition held annually in the USA.

Please do continue though to write up your own work within the teaching and learning of the MSOR subjects so that we can continue to share your good practice with others. As always, I would like to thank my fellow editors, the editorial board and all reviewers for their support in preparing this issue. To register for submissions/notifications, and for further information relating to *MSOR Connections* please visit <https://journals.gre.ac.uk/index.php/msor>.