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## **Enhancing learning of mathematics using screencasts**

Day 1 – Parallel III (16.30-17.00)

This study has trialled the use of 'screencasts' to aid students' learning in mathematics. Short videos were produced of selected worked examples showing the tutor's penstrokes with an audio commentary. Students were able to see the example as it unfolded, and hear the language that goes with it, both of which have been proven to be beneficial in learning mathematics. The screencasts could be watched as often as the students wished, allowing them to revisit examples from class or to catch up if absent.

The screencasts were produced to supplement teaching and learning for a second year undergraduate calculus module, in which several 'threshold concepts' have been identified in the literature. One feature of such concepts is that they are 'troublesome' for students, and therefore likely to need to be revisited a number of times. It was envisaged that the screencasts could be particularly beneficial for these threshold concepts.

Feedback was collected via a short online questionnaire. All who responded felt the videos helped a lot in their understanding of the topic and would like to see more. Overall, the screencasts combine benefits of technology with the proven value of traditional 'chalk-and-talk' methods for teaching mathematics. They are popular with students and straightforward for staff to produce.