CAMBRIDGE COLLOQUIA IN MATHEMATICS EDUCATION

Monday 19th October 2009 at 5.00 p.m., Room 205, Mary Allan Building, Hills Road

Prof Bill Barton, The University of Auckland, New Zealand

TELLING MATHEMATICAL TALES: MATHEMATICS IN DIFFERENT LANGUAGES

How do different languages express mathematical ideas? Mathematics can be expressed grammatically in a variety of ways. In flights of fancy, I expand these into new mathematical worlds. Mathematics emerges as more contingent upon human experience than is usually accepted. I further illustrate the conjunction between mathematical and language development, building on Devlin's concept of the Mathematical Gene, presenting alternative answers to conventional questions about mathematics: where it comes from, how it develops, what it does and what it means. Finally, I will consider how these playful ideas impact on mathematics education.

Monday 23rd November 2009 at 5.00 p.m., Room 205, Mary Allan Building, Hills Road

Fay Turner, University of Cambridge

CAN FOCUSED REFLECTION ON MATHEMATICS TEACHING DEVELOP TEACHERS' MATHEMATICAL CONTENT KNOWLEDGE?

The mathematical content knowledge of teachers has been identified as an important factor in effective mathematics teaching and learning in primary schools (Williams, 2008). In this presentation, I attempt to answer the question in the title using findings from my four-year study of three primary school teachers. Ideas addressed will include: the nature of mathematical content knowledge needed for teaching; the Knowledge Quartet framework (KQ) as a tool to support reflection on the mathematical content of teaching; aspects of mathematical content knowledge that appear most likely to be developed through reflection using the KQ; and the relationship between developments in teachers' content knowledge and effective mathematics teaching.

Tea and coffee will be available before each meeting. All are very welcome.

For directions to the Mary Allan Building and any other information, contact Tim Rowland at tr202@cam.ac.uk