Where is the Mathematics in the Continuing Professional Development of Mathematics Teachers?

Keith Jones
University of Southampton

“Subject knowledge” is increasingly being seen as a critical component of effective teaching yet very often (and particularly for secondary teachers) this subject knowledge is taken for granted. The study of mathematics is a required component of the initial education of teachers who will specialise in teaching mathematics, either as a prerequisite in the case of the one-year PGCE or as an integral part of the B.Ed. degree. What becomes of the study of mathematics for these teachers after that initial education? What opportunities exist for specialist teachers of mathematics, either primary or secondary, to undertake further study in mathematics? What is the experience of those involved in designing and teaching the mathematics components of course such as the 20-day DFE designated INSET courses and/or of Master’s courses? This conference session provides the opportunity to address such questions.

Session format: Introduction by Keith Jones (University of Southampton), followed by two short case studies. The first describes the experience of one institution of teaching the mathematics components of a 20-day DFE designated INSET course for primary teachers. The second input describes the experience of another institution of teaching the mathematics education components of a Master’s course.

Groups of participants then meet to discuss the following questions:

What does it mean to know mathematics for teaching?

What constitutes effective subject knowledge of mathematics?

How can teachers increase their knowledge of mathematics?

What is the role of initial teacher education in respect of subject knowledge of mathematics?

What is the role of in-service education such as 20-day course and award-bearing courses such as certificates, diplomas and master’s degrees in this respect?

How is inadequate subject knowledge of mathematics manifested?

What is the relation between subject knowledge of mathematics and beliefs about the subject?