



# Mathematics & Mathematics Education Seminar



Prof. Jenni Ingram

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Date: 6 Aug 2024  
Time: 1430 – 1530  
Venue: TR 712



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## Assessing mathematical reasoning: Implications and reflections from PISA 2022

### Seminar Abstract:

The Programme of International Student Assessment (PISA) introduced a new core cognitive process subdomain in the 2022 mathematics assessment, mathematical reasoning. Since its inception, PISA has focused on measuring pupils' abilities to use mathematics knowledge and skills in real-life challenges, focusing on the processes of formulating situations mathematically, employing mathematical concepts, facts, and procedures and interpreting, applying and evaluating mathematical outcomes. Mathematical reasoning was included within each of these, but in 2022 it was separated out, with trend items reclassified and new items developed. In this talk, we will look at the performance in mathematical reasoning relative to performance in these other process subdomains across those countries and jurisdictions where the majority of pupils took the assessment in England. Similarities and differences in performance can be potentially explained in different ways, with different implications for mathematics education policy, practice and research. These explanations also raise questions about and expose limitations in what PISA can tell us, which do not necessarily reflect the ways in which PISA results are used (and abused) by different stakeholders.

### Biography:

Professor Jenni Ingram is a Professor of Mathematics Education at the University of Oxford, UK. Jenni began her career as a mathematics teacher in comprehensive secondary schools in England before moving into research and mathematics teacher education. Her research focuses on large-scale international assessment within mathematics education. She was a member of the PISA 2022 International Mathematics Expert Group and Research Lead for PISA 2022 in England, Northern Ireland and Wales. She also researches mathematics classroom interaction and communication. She is a Fellow of Linacre College, Oxford, the Institute of Mathematics and its Application, and the Royal Statistical Society. She is Editor of the international journal *Research in Mathematics Education* and publishes widely in mathematics education and teacher education. She is the current chair of the European topic study group on Communication, Interaction and Language in mathematics education. She also thoroughly enjoys her role as a mathematics teacher educator working with both preservice and experienced mathematics teachers on their professional journeys.