

## Analyzing Mathematics Education with Large-scale Assessment Data

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### Abstract

In recent years, International Large-scale Assessments (ILSAs) like the Trends in Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA) have become more and more influential on countries' mathematics education policies and curricula. In this workshop you will learn about the background of these two studies (including limitations), the way they conduct their studies, and some ways in which their data can be analysed.

Specifically, the workshop will offer:

- 8:30 – 9:15 An in-depth overview of the role of TIMSS and PISA (plus some other studies) in policymaking, including strengths, critiques and limitations.
- 9:15 – 10:00 In-sight in the so-called 'complex sampling design' of these studies and what this means for data analyses.
- 10:00 – 10:30 Break
- 10:30 – 12:00 Hands-on demonstration (during which you can 'click along') of analysing TIMSS and PISA in the statistical packages R and Rstudio ([www.rstudio.com](http://www.rstudio.com)). This will include some basic R knowledge, relatively simple statistical analyses including descriptive statistics, and some pointers to more advanced statistical techniques.