

## **Title: Investigating Problem Solving in the Irish Post-Primary Mathematics Classroom**

**Short title:** Problem Solving in the Post-Primary Mathematics Classroom

While previous mathematics curricula have highlighted mathematical structures, abstraction and procedures, the trend of curriculum reform internationally has placed far more emphasis on problem solving as a key element of students' learning. Problem solving has become a core element of the Irish post-primary mathematics curriculum and is specifically included in all five syllabus content strands. While research has been conducted on Irish post-primary students' beliefs about problem solving (Prendergast et al., 2018), little is known about teachers' understanding of problem solving in the context of their students' learning. Furthermore, no research has been undertaken on the enactment of problem solving in the Irish mathematics classroom. In this research, post-primary mathematics teachers' beliefs and classroom practices associated with problem solving will be investigated. The research will be undertaken within the national landscape of curriculum reform where large-scale teacher professional development, including the introduction of Lesson Study, has taken place. Classroom observations, along with teacher interviews and student questionnaires, will inform the research and an intervention will be subsequently designed and evaluated to support teachers to incorporate problem solving as a central element of their mathematics pedagogy. The project will contribute to national and international research in mathematics education and the successful candidate will develop a range of research and educational skills throughout their PhD.

All interested candidates should meet the requirements of the UCD School of Mathematics & Statistics and should communicate their interest to Dr Aoibhinn Ni Shuilleabhain prior to their application: [aoibhinn.nishuilleabhain@ucd.ie](mailto:aoibhinn.nishuilleabhain@ucd.ie).

The references below may be of further interest to potential candidates.

### **References**

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