TSG 2
MATHEMATICS EDUCATION AT TERTIARY LEVEL

The Organizing Team

Chair: Ghislaine Gueudet, University of Brest, France

Cochair: Irene Biza, University of East Anglia, UK

Members:

Victor Gilraldo, Federal University of Rio de Janeiro, Brazil

Azimehsadat Khakbaz, Bu-Ali Sina University, Iran

Rongrong Cao, Qingdao University, China

Research in mathematics education at the tertiary level has developed significantly over the last decades by addressing a variety of issues in the teaching and learning of mathematics and by employing a range of theoretical and methodological perspectives. The aim of the Topic Study Group 2 (TSG 2) is to share and discuss the recent results of research and of teaching experiences at the international level, and to identify perspectives for future research. The questions studied can concern "traditional" courses, such as "chalk and talk" lectures in relations to teachers' practices and students' difficulties or achievements. They can also relate to "innovative approaches", such as design, implementation and evaluation of experimental courses. The contributions can address particular mathematical domains or mathematical practices. They can also concern teaching and learning practices such as assessment, use of technologies or resources; or university teachers' professional knowledge and professional development. Also, we expect submitted proposals to address the variety of tertiary programs that include mathematics, such as pure mathematics, engineering, teacher education, etc. Contributions can engage explicitly with theory (e.g., cognitive, socio-cultural, institutional, discursive, etc.) and certain methodological approach or can share a systematic reflection on teaching and learning practices. TSG 2 welcomes experienced and new researchers in mathematics education, as well as anybody interested in the teaching and learning of mathematics at tertiary level, in particular mathematicians.

TSG 2 gives specific attention in the following subthemes:

Subtheme 1: Mathematics Teaching at the Tertiary Level
This subtheme considers any kind of teaching, from traditional to experimental, including the use of

resources and technology. It concerns teaching practices, assessment, university teachers' knowledge, discourses and professional development.

Subtheme 2: Students' Practices and Experiences in Mathematics at the Tertiary Level
This subtheme concerns student learning and practices, including mathematical practices and studying approaches such as homework. It can also include student affect and broader institutional and social issues, such as recruitment and retention.

Subtheme 3: Mathematical Topics Teaching and Learning at Tertiary level
This subtheme concerns studies focusing on particular mathematical topics or practices, such as Calculus, Differential equations, Linear Algebra, Number Theory, Probabilities, Statistics, Modelling, Proof, etc. and how these are related to the teaching and learning of mathematics at tertiary level.

Subtheme 4: Transitions to, across and from Studies of Mathematics at Tertiary Level
This subtheme concerns issues identified in the transition from Secondary to Tertiary level; within the Tertiary level; and transitions happening when students leave university, for example, to become teachers or professionals (e.g. engineers).

Subtheme 5: Mathematics for Other Disciplines at the Tertiary Level

This subtheme concerns mathematics for non-mathematics specialists of a variety of subjects: Economics, Engineering, Science etc. It also includes mathematics for prospective teachers.

TSG 2 contributions will include regular TSG 2 presentations of invited and selected papers; short presentations of selected papers; and, posters.