



TSG 13 Teaching and learning of geometry – secondary level

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This is a forum for researchers, developers, and educators concerned with the teaching, learning, thinking, use, and curriculum of secondary geometry in a variety of settings. Geometry has traditionally been included as a subject of study in secondary mathematics curricula, but it has also featured as a source in out-of-school problem solving, and it has been connected to human activities like sports, games, and artwork. Furthermore, geometry usually plays a role in teacher preparation, undergraduate mathematics, and the workplace. Our topic study group welcomes scholars and practitioners concerned with geometry across those and other settings, including individuals working with computing, media, and traditional technologies, and individuals interested in modeling reality with any branch of geometry. This study group of ICME13 aims to bring together conference participants to share research results, research projects, new developments, and updates on ongoing projects concerning geometry at the secondary and university level. The group will focus on discussions on the following themes:

- Curricular issues in school geometry
- Technological tools and environments for the study of geometry
- Applications of geometry for modeling real world situations and the study of other disciplines
- Connections between geometry and the study of other branches of mathematics

- Connections between geometry and mathematical practices and processes such as argumentation and proof, visualization, figuration, and instrumentation
- Student conceptions and learning of geometrical ideas and their use in geometric problem solving
- Youth and adult geometrical competencies out of school and at the workplace
- Practices and problems in the teaching of geometry
- Geometry, teacher preparation, and teacher knowledge

We aim to include discussions from various perspectives: historical, epistemological, cognitive, semiotic, sociocultural, etc. This Group will have short presentations, paper discussions (following the model from CERME), and posters by participants as well as a longer presentations by an invited speaker (to be announced) and a closing presentation by team members. Scholars interested to participate can connect with Team Members through the ICME2016-TSG13 group in LinkedIn or write to the co-chairs at pgherbst@umich.edu or uhcrecsam1@gmail.com. The format of the submissions will be announced soon.