



15th International Congress on
Mathematical Education

7-14 July 2024 • ICC Sydney, Australia
Come and be counted

Topic Study Group 5.12: Popularization of mathematics

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Team details

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Overview

The Popularization of Mathematics Study Group (TSG 5.12) is about the perceptions of mathematics and its learning. The group will bring together those interested in popularizing mathematics through common mediums (content design, teaching resources, curricula) as well as alternative mediums (exhibitions, outreach programs, media).

Areas of interest

We are looking forward to receiving submissions from multiple perspectives, those including but not limited to:





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- Perceptions of mathematics.
- Mathematics in media.
- How the future of mathematics is seen.
- Inspiring new generations.
- Mathematics' worth.

The group aims to pin submissions around two topics:

1. The stereotypical resistance that the general public has towards mathematics and suggested solutions
2. The subjectivity of the image of mathematics

Topic 1

In the eyes of the general public, mathematics is often deemed as a demanding subject that only belongs to the elite mathematicians, scientists and engineers. There is an apparent need to evaluate the degree of popularity of mathematics, as well as find ways to communicate the value of knowing and enjoying mathematics. The *Popularization of Mathematics* by Howson and Kahane (1990) is the first book to take on this topic. In this book, the authors give the definition for the term “popularization”, explain the challenges of popularization of mathematics and provide suggestions on how to popularize mathematics. TSG5.12 will focus on how to keep pace with the technological advancements in current times to achieve a positive image of mathematics by the general public. We look forward to submissions, and subsequent discussion, on topics such as recreational mathematics including games and puzzles, interdisciplinary mathematics including mathematics in art, music and literature, mathematics from other times and other cultures, and public resources including exhibitions in museums, social media, blogs, videos and podcasts.

Topic 2

In *Rethinking the History of Science Popularization/Popular Science* by Topham (2009), the author states that the history of science popularisation has often seemed to be secondary to science itself, only happening once knowledge has been successfully constructed and approved by specialists. This seems to suggest one-way communication and assume an authorship of knowledge construction. Nowadays, knowledge construction is seen as collaborative and iterative, and perceptions of knowledge as part of the construction process. In TSG5.12 we welcome submissions about the subjectivity of the image of mathematics. Mathematics is often claimed as critical, and valued as a virtue worth pursuing by governments and authorities. The receiver of mathematics teaching,





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especially if struggling with the content, might have an opposite view of the relevance of mathematics. We shall include topics about how mathematics is perceived, and how the popularity of mathematics differs across focus groups. Who owns the image of mathematics?

How to make a submission to this Topic Study Group

Submissions for Topic Study Group Papers and proposals for Posters open 28 April 2023 via the official ICME-15 website, icme15.org. The website also contains a timeline of dates for the activity of the Topic Study Groups in the lead up to the Congress.

For questions about this TSG, please contact the Co-Chairs using the email addresses provided.

