

## **CERME 13: Thematic Working Group 29**

### **Embodied and material studies of mathematical behaviour**

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#### **Scope and focus of the Working Group**

In the last decades, major paradigmatic shifts across the social sciences have inspired new research on the embodied nature of mathematical activity. Attention has turned to students' and teachers' bodily actions and multimodal communication, revealing the material nature of mathematical concepts, and the sensory ecology of mathematics classrooms. Many of the new insights are linked to theoretical shifts regarding embodiment and materiality, but also to design-based research methodologies and the use of new research technologies, such as motion sensors, multitouch screens, eye trackers, and emotion recognition systems. Research in this area raises questions about the role of agency, dis/ability, multimodality and technology in mathematical thinking and doing.

#### **Call for papers and poster proposals**

We welcome all researchers interested in mathematical embodiment and materiality. Contributors are invited to submit papers and posters, addressing any of the following aspects as they relate to teaching and learning mathematics:

- sensory-motor processes, including gesturing, eye movements, drawing, touch, speech;
- aesthetic and material making processes;
- group activity and coordination between bodies;
- affect and emotion as socio-material phenomena;
- technology, material artefacts, embodied technicity;
- diversity of racialized, gendered, dis/abled bodies.

TWG29 will collaboratively explore the aforementioned aspects and invites scholars with diverse theoretical perspectives on the role of the body in mathematical behaviour, such as posthuman and neo-materialist perspectives on the body and eco-cognition, complex and functional dynamic systems perspectives on bodily coordination, cultural-historical approaches to sensual cognition, phenomenological and enactivist studies of lived experience, amongst many others. We are committed to unpacking the implications of these perspectives on the future of mathematics education in formal and informal settings and welcome a broad range of studies that share our curiosity.

Papers and poster proposals should use the CERME template, and conform to the guidelines at <https://cerme13.renyi.hu/>. CERME 13 uses an electronic submission system <https://www.conftool.pro/cerme13/>. The authors submit the initial version of their paper on the website (uploading it both as a .doc and a .pdf file, and providing the required information, in particular the TWG number).

#### **Reviews and decisions**

Each paper will be peer-reviewed by two persons from among those who submit papers to this TWG. Please expect to be asked to review up to two papers yourself. The group leaders will decide about the acceptance of posters.

#### **Important dates**

- **15 February 2023:** Deadline for submission of papers and posters.
- **5 April 2023:** Preliminary decisions on papers and posters.
- **10-14 July 2023:** CERME 13 takes place.
- See <https://cerme13.renyi.hu/deadlines> for other important dates