

## SIG Mathematics Birth to Eight Years

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## 1. Aim of the SIG:

The EECERA SIG Mathematics aims to coordinate and disseminate international research on the discourse in the emerging early childhood mathematics education field. It creates a space for shared thinking and for creating synergies between participants from a wide range of professional and scientific contexts to encourage a clearer articulation and understanding of early childhood pedagogy, policy and practice in relation to mathematics.

## 2. Activities 2021-2022:

In 2022, SIG members organised two self-organised symposia and participated in two individual paper symposia for the EECERA conference in Glasgow, which was held in August 2022. The four symposia were:

1. Title: Playful learning of powerful mathematical knowledge in early childhood  
Chair: *Oliver Thiel*
  - 1.1. *Catherine Gripton*  
**Developing mathematical patterning in ECE classrooms: participatory research with teachers of 3-5 year olds**
  - 1.2. *Judith Fabrega, Mequè Edo, and Alba Torregrossa*  
**Supporting early mathematics through play: Number Decomposition**
  - 1.3. Anne Nakken, Oliver Thiel  
**Child led animation video production to enrich mathematical thinking**
2. Title: Mathematics and Play in Early Childhood: Children, Teachers and Families  
Chair: *Bob Perry*
  - 2.1. *Bob Perry*  
**Let's Count: Revision and Redevelopment**
  - 2.2. *Elizabeth Carruthers*  
**Early Years Teachers Perspectives on their Pedagogies of Play and Mathematics**
  - 2.3. *Maulfry Worthington*  
**Play, agency and young children's mathematics**
3. Title: Digital technologies and mathematical learning  
Chair: *Andreas Ebbelind*
  - 3.1. *Andreas Ebbelind, Hanna Palmér, Marina Wernholm, Emelie Patron, Kristina Danielsson*  
**Six-year-olds create digital animations to reinforce mathematical problem solving**
  - 3.2. *Liliana Silva and Andrea Maffia*  
**Validation of a tool to assess mathematical skills with board games in early years**
4. Title: Sorting maths in ECEC  
Chair: *Chrystalla Papademetri*
  - 4.1. *Chrystalla Papademetri*  
**A Pedagogy of willingness to uncertainty, triggering the unexpected: Stories of children playfully doing mathematics!**
  - 4.2. *Lisa Kristina Lunde, Hjørdis H. K. Bakke, Christine Seehuus, Anne Nakken*  
**Sorting and re-sorting**
  - 4.3. *Lynn O'Dwyer*  
**Exploring Early Years Mathematics Teaching and Learning in the context of an Irish Preschool Classroom**

The SIG meeting was held on Tuesday, 23 August 2022. Sixteen members attended the meeting physically and six online. The meeting elected Maulfry Worthington as new co-convenor.

### **3. Future activities:**

The SIG started a new book project about play. The book shall be published in the EECERA Praxis Series. The series focuses on knowledge and reflection, which has relevance and topicality for those at the front line of decision-making and professional practice. It should be helpful for early childhood practitioners, stakeholders, teacher educators, and researchers. The aim is to write a book showing practitioners that mathematics emerges in children's play and can be done everywhere and at any time – not only with teacher-led activities on Friday between 2 and 3 o'clock.

The proposed structure of the book: It starts with a general introduction to play in early childhood mathematics education. The following chapters contain different perspectives on play and focus on various mathematical content areas. Each chapter should be written in cooperation by at least two authors with varying backgrounds from separate countries. The aim is to present the diverse understandings of play and the various ways mathematics emerges in children's play. The last chapter summarises and analyses the different contributions in the book, searching for patterns that emerge.

Possible perspectives can be

- How to enrich mathematics in play without destroying the play
- Key issues that teachers/educators have to understand
- Different policies and organizational structures in various countries
- Various approaches for distinct age groups
- Exemplifying what mathematics can be in different situations

Oliver Thiel, Maulfry Worthington, Elizabeth Carruthers, and Chrystalla Papademetri will be editors. Winfried Roelofs would like to be a reviewer. The editors received twenty expressions of interest.

### **4. Networks established with other institutions and organisations:**

**Facebook:** <https://www.facebook.com/groups/1515014682076863/>

**LinkedIn:** <https://www.linkedin.com/grp/home?gid=6928873>

### **5. How do the SIG's activities fit with aims and ethos of EECERA:**

In line with EECERA's main principles, the SIG Mathematics Birth to Eight Years provides an academic and rigorous forum at a European and international level to develop and disseminate high-quality research on early childhood mathematics education. It aims to coordinate and disseminate international research on the international discourse in this emerging field. It continues to create a space for shared thinking and for creating synergies between participants from a wide range of professional and scientific contexts to encourage a clearer articulation and understanding of early childhood mathematics education.