A perspective of the experience at CCMEME Symposium

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I am a PhD student in Mathematics Education at São Paulo State University, Brazil. My research is about origami and Mathematics Education, mainly addressing questions about how paper folding can contribute to the production of mathematical knowledge. Paper folding and mathematics education have been studied to support learning environments (Yazlik & Çetin, 2023), to assist in the production of geometric knowledge (Natalija, Lavicza, Fenyvesi & Milinkovic, 2020), also to explore spatial visualization and development of reasoning (Arici & Aslan-Tutak, 2015) or for the development of aspects of computational thinking (Graciolli, Rocha Junior & Scucuglia, 2022; Budinski, Lavicza, Fenyvesi & Novta, 2019).

The interest in participating in the "Coding, Computational Modelling, & Equity in Mathematics Education Symposium" arose after the invitation from my advisor, Professor Dr. Ricardo Scucuglia, to contribute to the production and presentation of a poster about some research that was developed in Brazil about computational thinking. Furthermore, during my time as Visiting Research Only (VRO) at Western University, under the guidance of Professor Dr. Immaculate Kizito Namukasa, she also told me about the event during an orientation meeting.

During the event I had the opportunity to present, together with my advisor, our work entitled "Research on Aspects of Computational Thinking in Brazil". All the comments and questions were very interesting and made me think about other aspects that can be developed in the research. In addition to presenting, I was able to learn about the research of other participants at the event, I learned about different approaches and software, such as Virtual Reality, Augmented Reality, block programming, unplugged activities, different languages and Scratch, CoSpace, ThinkerCad, Micro:Bit, Ozobots , GeoGebra, ChatGPT, among others.

I learned about different perspectives on computational thinking and computational modeling (Gadanidis, 2017; Brennan & Resnick, 2012; Gadanidis, Hughes, Namukasa & Scucuglia, 2019) and the importance of discussing such issues in relation to Mathematics Education. The lectures were important for opening possibilities beyond the perspectives already studied in Brazil. I was surprised by the different possibilities of articulating computational thinking with art, algebra, mathematical thinking, justice, equity, inclusion, racism, among others. Furthermore, it was very interesting to listen to researchers from different parts of the world, both in the lectures and in the poster sessions, I had contact with people from Canada, Netherlands, Brazil, United Kingdom, United States of America, Colombia, France, Australia, South Korea, Mexico, etc.

In conclusion, with the event I was able to broaden my research and practice horizons. Mainly during the discussion group meetings "Equity, diversity, and inclusivity in coding and computational modeling in mathematics education" where I had the opportunity to think about situations in which coding could be part of an action towards equity, diversity, and inclusivity. The discussions raised in this group made me rethink origami as an opening for computational thinking (Graciolli, Rocha Junior & Scucuglia, 2022) and consider the possibilities of investigating origami, fractals, and coding. Something I wonder now is how activities with paper folding and coding can contribute to mathematical education and what we should consider for equity, diversity, and inclusivity.

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