NUMTA 2023 Special Session on

Computational tools and new trends in math and science education

Organizers: Annabella Astorino¹ and Fabio Caldarola²

¹Dep. of Computer Science, Modeling, Electronics and Systems Engineering, University of Calabria Ponte Bucci, 87036 Arcavacata di Rende (CS), Italy

²Dep. of Environmental Engineering, University of Calabria Ponte Bucci, 87036 Arcavacata di Rende (CS), Italy

Email: annabella.astorino (at) dimes.unical.it, caldarola (at) mat.unical.it

Session keywords: Mathematical education (m.e.), science education, computational software in m.e., teaching support software, grossone, philosophical and theoretical contributions in m.e., mathematics teaching methods, classroom techniques, cognitive processes, teaching-learning processes, language of mathematics (educational aspects), reasoning.

Session abstract: This session collects different contributions that have general implications for teaching mathematics and science. The speeches concerning alternative methods in teaching mathematics and new computational methods used in teaching particularly hit the mark. Philosophical underpinnings and cognitive processes in learning mathematics, mainly focused on number systems and all kinds of numerical computations, are welcome. Another noteworthy mention is modern computational software and its possible uses to support teaching.

This session is dedicated to the memory of a young mathematics teacher, Giovanni Bozzolo. Born in Tropea (VV) in 1993, he attended the Liceo Scientifico "Pietro e Paolo Vianeo" in his hometown. Then he studied at the University of Calabria, where he obtained the Master's Degree in Mathematics in 2020. Since September 2021, he has been teaching Mathematics and Physics at the Liceo Scientifico "Manfredo Fanti" in Carpi (MO), crowning his dream as a high school student. On December 23, 2021, an accidental petrol explosion in his home garage in Carpi killed him at 28 y.o. Giovanni Bozzolo deeply loved teaching Mathematics and was happy to do so: we want to dedicate the works of this session on teaching Mathematics to him, encouraging the new generations, in particular, to love this discipline.