EUCLIDES γ΄, 100 (1–2), 2024

Editorial

Dear colleagues

We are pleased to present the new (double) issue of the scientific journal Euclides γ΄, the publication of which marks a significant milestone for our journal: it is the Centennial Issue! To celebrate this sociocultural milestone, our journal is transitioning into a new hybrid era:

- The Centennial Issue is the *first* to be primarily available in digital format, freely accessible to anyone interested, while also being available in print.
- All previous issues will also be made available in digital format, freely accessible to all.

Through this initiative, the Hellenic Mathematical Society continues its commitment to supporting classroom educators, scientists, researchers, and all members of the Mathematics Education and Didactics of Mathematics community. This transition ensures that reliable scientific knowledge, provided within the framework of a historically reputable institution, remains accessible to all who seek information and wish to contribute their scientific expertise to the dissemination of knowledge.

To honour this commemorative issue, distinguished figures in the field of Mathematics Education and Didactics of Mathematics, particularly those who have served the discipline in various institutional roles, have contributed their specialized knowledge and experience. These roles include:

- Editor of Euclides γ΄,
- President of the Hellenic Mathematical Society (H.M.S.),
- President of the National Council of Teachers of Mathematics (N.C.T.M.),
- President of the Greek Association of Researchers of Mathematics Eduacation (Εν.Ε.Δι.Μ.),
- Dean of the Faculty of Science,

- President of the Department of Mathematics at the National and Kapodistrian University of Athens (E.K.P.A.),
- Member of the Board of Directors of H.M.S.,
- Member of the International Commission for the Study and Improvement of Mathematics Teaching (C.I.E.A.E.M.),
- National Representative in the International Commission on Mathematical Instruction (I.C.M.I.),
- Editor of the Journal of Mathematics Teacher Education,
- Editor of the scientific journal Research in Mathematics Didactics,
- and others.

These contributors were invited to participate through personalized invitations, each focusing on different aspects of the field, aiming to comprehensively map the complex domain of Mathematics Education and Didactics of Mathematics. In total, eighteen authors have contributed fifteen original papers to this special issue of almost four hundred and fifty pages. Notably, two of these papers were originally submitted in English and two in French, necessitating translation into Greek. We extend our gratitude to Maria Giakoumi and Elena Mandila for translating the texts into Greek, as well as to Fragkiskos Kalavasis for his critical review of the French translation. Leveraging the digital capabilities of the journal, we have also published the original texts of these four articles. At this point, we wish to thank Ms. Panagiota Kaskaouti, PhD candidate at the Department of Primary Education, E.K.P.A., for her invaluable assistance in managing the formal and substantial formatting of submissions for such a voluminous issue.

The issue begins with three papers focusing on the *historical dimension* of Mathematics Education and Didactics of Mathematics.

- Stavros Papastavridis, a long-time Editor of Euclides *γ΄*, in his paper "Euclides γ΄: A concise history (1983-2021)", chronicles the historical trajectory of the journal, linking it to the corresponding sociocultural conditions.
- Giannis Thomaidis and Andreas Poulos, in their work "Greek Journals for Elementary Mathematics and Mathematics Education: 1916 – 1924", document the mathematical journals in Greece, highlighting critical aspects such as their publication timelines, durations, and the individuals and organizations involved in their production.
- Jean Dhombres, in "L'intérêt de ne pas négliger de débattre sur ce qu'il est nécessaire d'enseigner en mathématiques parce qu'utile à la

vie en société", explores the intricate relationship between Mathematics, Mathematics Education, and sociocultural frameworks in different historical periods through two specific examples.

The next three papers examine the complex relationships between Mathematics, society, and education:

- Ioannis Emmanouil, in "The importance of mathematics for development and social cohesion, and the role of basic research", discusses various perspectives on the relationships between theoretical Mathematics, mathematical applications in science and technology, and Mathematics Education.
- Kevin Dykema, in "Increasing Opportunities for Students in Mathematics", addresses the crucial issue of enhancing opportunities for access and success for all students in Mathematics.
- Fragkiskos Kalavasis, in "The contribution of Didactics of Mathematics to the coherence of Euclides γ' and to a systemic approach to Mathematics Education", highlights the significance of a systemic perspective for meaningful interactions, emphasizing the cohesive role of Mathematics Didactics and a journal like Euclides γ'.

Five papers focus on the relationship between *Mathematics Education and expanded, inclusive educational systems*.

- Sonia Kafoussi, in "Discussing the goals of mathematics education in modern curricula", explores the connections between Mathematics Education and contemporary curricula, with a focus on the Greek context.
- Marianna Tzekaki, in her paper «Teachers' education for mathematics, old and new reality», presents key aspects of mathematics teacher education, particularly for early childhood and primary education, proposing approaches that align with the evolving and highly dynamic educational landscape.
- Despina Potari, in "Mathematics Education and Professional Development of Teachers", highlights the complexity of teacher training and professional growth, emphasizing the importance of teacher collaboration and the interplay between research and educational practice.
- Elena Nardi, in "Mathematics Education and Mathematics at the University: Towards Harmonization?", investigates the complex issue

of teacher education at the university level and the preparation of future educators.

- Charoula Stathopoulou, in "Towards an (Inclusive) Mathematics Education in the Postcolonial Era: The Greek Context and Perspectives", links Mathematics with sociopolitical structures, presenting relevant theoretical perspectives while drawing from the Greek educational landscape.

The issue concludes with four papers focusing on contemporary and rapidly evolving technological challenges in Mathematics Didactics and Education. The timely concept of computational thinking is the focus of two papers:

- Georgios Fesakis and Maria-Anastasia Moustaka, in "The integration of Computational Thinking in the teaching of Mathematics", examine computational thinking through its historical evolution and explore its integration into Mathematics instruction.
- Chronis Kynigos, in "Computational thinking in the service of cultivating mathematical competence: The case of tinkering with and animating 3D linear models", connects computational thinking with mathematical ability through specific approaches and examples.

Artificial intelligence (AI), a rapidly evolving issue, is also featured in two papers:

- Andreas Stylianides and Gabriel Stylianides, in "Important mathematical competences for students in the age of generative artificial intelligence: proof comprehension and evaluation, and ChatGPT", discuss the relationship between mathematical proof and generative AI, providing concrete examples.
- Christophe Assens, in "Le désapprentissage avec l'intelligence artificielle et les réseaux sociaux", broadens the discussion by examining the relationships between AI and human (un)learning mechanisms, raising questions that permeate Mathematics Didactics and Education.

We are grateful to all contributors that honoured our Centennial Issue with their valuable original inputs that we are sure would feed fruitful thoughts and vivid discussions.

We are delighted to present this Centennial Issue, leaving you to explore its rich content with one final thought: The linear organization of the papers in this printed edition is a necessity dictated by the format. However, the digital

version offers an equally valid nonlinear experience, allowing for a more flexible exploration of the issue's themes.

Enjoy your reflective journeys!

Andreas Moutsios-Rentzos & Andreas Poulos