



<http://dx.doi.org/10.23925/2237-9657.2022.v11i2p001-166>

Editorial

The Journal of the International GeoGebra Institute of São Paulo (IGISP), ISSN 2237-9657, of biannual regularity, is an electronic publication of the GeoGebra Institute of São Paulo based at the Faculty of Exact Sciences and Technology, Program in the Post-Graduate Studies in Mathematics Education of the Pontifical Catholic University of São Paulo (PUC-SP), Brazil.

Free of charge, it aims to offer a space for the dissemination and circulation of researches and works developed with the use of the software GeoGebra, mainly in Latin America.

This second issue of volume 11 of the 2022 journal presents seven articles and an experience report that seek to cover the different possibilities and paths with which GeoGebra can be investigated and, in a new space "Proposals for Action", we have two proposals that meet the respective objectives. For the next issues of the journal, other proposals will be welcomed to this section.

In the first article "*GeoGebra Discovery at EGMO 2022*" the author Maria Belén Ariño-Morera presents one study will show the ability (or inability) of GeoGebra Discovery to deal with Euclidean geometry problems proposed at the recent European Girls' Mathematical Olympiad – EGMO (Hungary, April 6-12, 2022)

The second article "*Building hyperbolic tessellations on the Poincaré disk with GeoGebra*" the authors Alfred James Dias Albon and Rudimar Luiz Nós present in this work some characteristics of the Poincaré disk geometry, a hyperbolic geometry in the plane, and we associate some constructions by the Dutch graphic artist Maurits Cornelis Escher with tessellations on the circle.

"*Two-Variable Linear Programming in an Online Course Using GeoGebra: A Class Experience*" is the third article and the authors Maythe Garcia Rivero, Natalia Rosalía Curbelo Duró and Verónica Flores Sánchez presents a pedagogical practice proposal that evaluates the use of GeoGebra as a cognitive tool in teaching the resolution of linear programming problems of two-variable inequalities based on the graphical method.

The research in the fourth article, "*GeoGebra Graphing Calculator for the study of polynomial, polynomial and Taylor series*" of the authors Agustina Bayés and Viviana Angélica Costa is held in a mathematics course at the Faculty of Engineering of the National University of La Plata and presents the problem of the study of Taylor's series and polynomial that requires knowledge related to polynomials and polynomial functions, which in Argentina begin to study in high school. The research is based on Mobile Learning.

José António Fernandes is the author of the fifth article "*Operating with positive numbers in GeoGebra: didactic implications*" aims to study numerical operations from Geometry and extract consequences for teaching.

In the sixth article "*GeoGebra software in the training processes of Mathematics teachers: state of knowledge of dissertations and theses in Brazil*" the authors Márcio Urel Rodrigues and Sinelza Gonzaga De Melo Azevedo presents the results of a bibliographic research that aimed to investigate the academic productions of dissertations and thesis defended in *stricto sensu* post-graduation programs in Brazil related to GeoGebra software for the formative processes of Mathematics teachers.

In the seven article "*GeoGebra in the Study of Trigonometric Functions from Graphical Analysis*" the authors Ângela Fernandes Pereira and Helder Vlademiro Correia Vaz describes the results of an experience with the use of technologies in the mathematics teaching, GeoGebra software application as a resource in trigonometry teaching/learning.

Finally, in the experience report "*The use of GeoGebra in laboratory practices in the construction of geometric concepts by undergraduates in mathematics at UECE*" the authors Ana Carolina Costa Pereira and Gisele Pereira Oliveira present the experience report about didactic possibilities of the use of GeoGebra in laboratory practices in the construction of geometric concepts by undergraduates in mathematics at UECE

The new section "Proposals for the Action" aims to briefly present proposals for action that researchers have for the use of GeoGebra in multiple contexts or as it is used in daily or teaching practice. Thus, in this issue we inaugurated this section presenting two proposals by the author Humberto José Bortolossi.

In the first proposal "*From 2D to 3D: investigating generalizations of triangle properties for tetrahedrons*" Humberto Bortolossi and Rogério Vaz de Almeida Júnior present a research process that articulates the flat and spatial geometries.

In the second proposal "*Modelling a peculiar artistic piece in GeoGebra 3D/RA*", Humberto Bortolossi and Lhaylla Crissaf presents the geometric modelling of an artistic piece called "squaring the circle", on display at the Kohn gallery in Los Angeles-USA, using GeoGebra 3D.

The papers presented show the possibility of interdisciplinarity and trans disciplinarity in the context of Mathematics Education and in STEAM.

We express our thanks to all who contributed to the realization of this volume of the journal and to the academic production of Mathematics Education.

Celina A. A. P. Abar - Editor