

NEW CLASSROOM MATERIALS FOR COMPUTER AIDED MATHEMATICS

Goal of the project

The project objective is to improve teaching practice, to develop GeoGebra applications which are useful to understand abstract mathematical notions and to produce dynamic and interactive documents dedicated to the first-year mathematics courses.

Short description of the project

All applets take advantage of GeoGebra's dual graphic view capability, which allow to simultaneously visualize two graphical representations and facilitates the study of transformations of the complex plane and of complex variable functions.

Project implemented by

Department of Mathematics and GeoGebra Institute of UPT

Implementation period

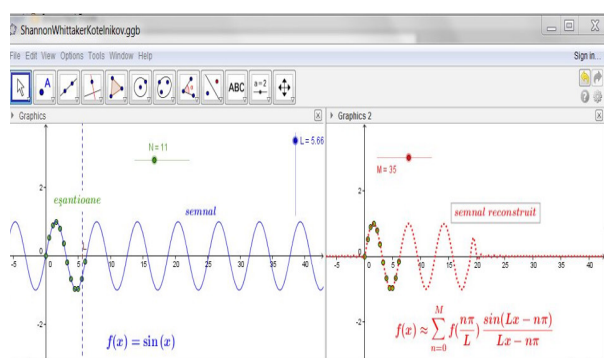
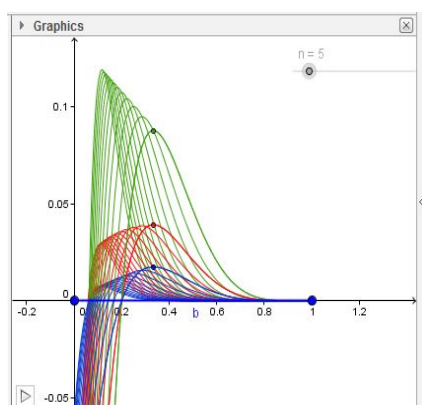
26.06.2012-01.06.2015

Main activities

- Weekly meetings with students at Geogebra Institute of UPT
- Support materials for life-long education of math teachers.
- Periodic uploads to GeoGebra Tube.

Results

- Applets for Calculus: Convergent sequence and its limit, The Taylor polynomial, Fourier series and Gibbs phenomenon, The Young's inequality, Random integral sum, The Cubic root of complex numbers, Simple convergence versus uniform convergence.
- Applets for Linear Algebra and Geometry: Linear transformations in the real plane and 2x2 matrices; Dynamically generated 2D curves, About oriented curves.
- Applets for Applied Mathematics: Differential equations and stability, About Shannon sampling theorem.



Applicability and transferability of the results

All GeoGebra applets can be classified as didactical modeling and are appropriate to be utilized in the classroom.

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- Department of Mathematics
- SC ANCA ELECTRIC SYSTEMS SRL, Timișoara

Research Centre

GeoGebra Institute of UPT

Research team

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