

An excursion to the visual world of complex functions and dynamics

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However complex analysis seems to be an extremal discipline of teaching of mathematics, many areas of introductory education at university level are much easier to understand if the student has some overview of behavior of complex functions. Many problems to be solved in real variable are specializations of the complex case, including dynamic systems, numerical analysis and differential equations. The workshop will summarize the benefit of using complex numbers for these usual areas of mathematics education.

Three different pieces of software will be shown applicable for the teacher's use: WebMathematics Interactive 2 (WMI2, <http://matek.hu>), Real-Time Zooming Math Engine (RTZME, <http://rtzme.sf.net>) and XaoS (<http://xaos.sf.net>). Surprisingly enough, we will also use a regular spreadsheet editor for basic visualizations.