

Using M@th Desktop notebooks and palettes in the classroom

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M@th Desktop (MD) is an interactive teaching and learning software package for mathematics classes. It contains a collection of Mathematica notebooks with associated palettes and packages, and is designed to be especially compatible with a blended learning strategy, in which computer - based activities are used to complement other approaches.

Universities and schools from eight European countries have been collaborating to develop MD – based courseware further together with didactical concepts for its use and material for in - service training. Two modules the MD Func and the MD Lin Alg were developed. MD also provides tools for teachers and students to create their own palettes, notebooks and activities. We propose a 90 - minute workshop, to be led by Phil Ramsden and Reinhard Simonovits, with M@th Desktop as its themes.

These resources, whose target group is secondary schools in Europe, enable teachers to pursue a problem – based and group - oriented approach to teaching mathematics that emphasizes methods and concepts over computations.

Activities are designed to encourage an experimental, explorative approach. The resources consist of extensions to M@th Desktop, developed by Reinhard Simonovits.

The first 30 minutes will be presenter - led : colleagues will learn about the background to M@th Desktop; then, following a brief introduction to Mathematica, be introduced to the courseware and led on a tour of its main features.

The remainder of the session will be hands - on. Colleagues will mostly play the role of learners, undertaking some of the activities that the team have created, especially in the area of functions and graphs. Colleagues will have the opportunity to explore, and feed back on, the distinctive features of M@th Desktop, designed to make Mathematica' s power accessible to students who are not necessarily Mathematica experts.

Colleagues will also be invited to play the role of the teacher, and to reflect and feed back on possible modes of use of this courseware in the classroom, including the many opportunities that exist for customisation.