

# Educational resources in the *Virtual Lab for School Mathematics*

QED'17 UNESCO International Workshop: Children in the Digital Era

September 21, 2017 Sofia, Bulgaria

## Abstract

In the recent years the Inquiry Based Mathematics Education is being implemented in Bulgaria in the frames of a series of European projects in which the Institute of Mathematics and Informatics at the Bulgarian Academy of sciences (IMI-BAS, <http://math.bas.bg/>) has been a partner: InnoMathEd, DynaMat, Fibonacci, KeyCoMath, Scientix, Mascil, and STEM PD Net. The goal is to make the students active participants in the learning process and to help them gain competences for life-long learning. The main efforts have been directed to the design and development of relevant educational environments in support of the exploration of mathematical facts and phenomena, learned at school. The Virtual Lab for School Mathematics (*VirMathLab*, <http://cabinet.bg/>) is being developed by the Department of Education in Mathematics and Informatics at IMI-BAS. Its resources are with free access.

The workshop will deal with introduction of various resources of *VirMathLab* and methods for using them. Ideas for integrating the classical didactical means with the digital dynamic tools and specially designed manipulatives for mathematical explorations will be presented.

## Target audience

Teachers, school principals, parents

## Duration

1 hour and a half

## Goals

The goal is to raise the awareness of teachers, parents and school principals for the variety of resources in the *Virtual Lab for School Mathematics* (<http://cabinet.bg/>) being developed by the Department of Education in Mathematics and Informatics at IMI-BAS in support of innovative educational strategies in a national and European context.

## Format of the workshop

Presentation, demonstration, hand-on activities with specific resources

## Preliminary schedule

Introduction of various resources of <i>VirMathLab</i> ( <a href="http://cabinet.bg/">http://cabinet.bg/</a> ) and methods for using them.	<i>P. Kenderov, T. Chehlarova</i>
Introduction of topics from the Virtual Lab of School Math, developed in collaboration with Evrika Foundation and Association of the industrial capital in Bulgaria <i>as well as</i> in the frames of the contract between BAS and the Council of Ministers - <b>ПМС №347, т.5 в) от 08.12.2016 г.</b> , activity „Introducing contemporary methods in education and work with young talents“.	<i>P. Kenderov, T. Chehlarova</i>

## Expected outputs

Presenting courses and resources in support of the professional development of teachers in mathematics and IT with emphasis on the inquiry based learning, experiencing mathematics as a natural component of the STEM education.

To disseminate on a larger scale the methods of using the resources of the Virtual Lab of School Math in support of the Inquiry based mathematics and IT education, for organising the control and self-control of the knowledge acquired, for motivating the students for learning activities in mathematics and IT.