

## **GeoGebra 3.2 – The new Spreadsheet View**

**Yves Kreis**, University of Luxembourg, Luxembourg,  
**Markus Hohenwarter**, Florida State University, United States,  
**Judith Hohenwarter**, Florida State University, United States

GeoGebra ([www.geogebra.org](http://www.geogebra.org)) is a free, multi-platform, open-source dynamic mathematics software with rapidly growing worldwide popularity. The basic idea of the software is to join dynamic geometry, algebra, and calculus, which other packages treat separately, into a single easy-to-use package for learning and teaching mathematics from elementary through university level.

So far GeoGebra's user interface allowed algebraic (i.e. coordinates of points, equations) and graphical (i.e. points, function graphs) representations of mathematical objects. While coordinates and equations were displayed in the algebra view on the left hand side, their graphical representations could be seen in the graphics view on the right hand side.

The release version 3.2 (available in April 2009) adds another – third – view: the spreadsheet view. Now various kinds of mathematical objects – not only numbers – can also be put inside spreadsheet cells. All representations of the same object are linked dynamically and adapt automatically to changes made to any of the representations, no matter how they were initially created. This enables users to connect statistical reasoning with other areas of mathematics. In this presentation we will introduce the new view, present some examples and discuss the opportunities it offers for the teaching and learning of mathematics.