

## **Teaching and Exploring Geometry with GeoGebra**

*Valentyina Pikalova, Kharkiv National Pedagogical University, Ukraine*

When mathematics interacts with technology, the possibilities are complex. Technology can affect the way mathematics done. It can also have a profound affect on the way that we teach and learn.

We present here some of our recent experience in designing and implementing a professional-level, moderated, online course in the use of GeoGebra software for teaching mathematics, particularly high school geometry. In addition to instruction in how to use the software, the course will offer participants pedagogical guidance on how to implement the use of GeoGebra in their classrooms and promote a discussion of how dynamic geometry affects the teaching and learning of mathematics. The course is structured into three weeklong units. While participants have flexibility within each week, the course is synchronous, meaning that participants are expected to begin and complete the activities for each week during the week they are assigned.

This course is primarily intended for secondary and middle school mathematics teachers. The course content focuses on high school geometry concepts, any current or prospective teacher can learn how to use GeoGebra to supplement the middle or high school mathematics curriculum.

The course was already implemented in practice in Kharkiv region for school math teachers and for students (future math teachers) from Kharkiv National Pedagogical University.