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*Triggering University Students' Mathematical Creativity and Intellectual Independence by Use of Technology*

In this presentation I will discuss university students' mathematical creativity and intellectual independence triggered through a specific use of technology, that is the design and implementation of mathematics Exploratory Objects: digital, interactive, easy to use, and exploration platform that are designed to explore a mathematics conjecture, problem or application. My reflection takes place in the context of the Mathematics Integrated with Computers and Applications (MICA) core undergraduate program launched at Brock University in 2001. Two main program principles are

- (1) encouraging student creativity and intellectual independence, and
- (2) developing mathematical concepts hand in hand with computers and applications.

In addition to the revision of all traditional courses (e.g. Analysis, Algebra, etc.), three unique MICA I, II, and III courses were developed as a concrete implementation of these two principles. It is in these courses that students learn to design, implement and use mathematics Exploratory Objects, including original final projects on a topic of their own choice (see [www.brocku.ca/mathematics/studentprojects](http://www.brocku.ca/mathematics/studentprojects)). I will conclude the presentation by briefly discussing how some students continue, beyond the MICA courses, to design Exploratory Objects.