



Keynote

CHALLENGES FOR THE NEXT GENERATION MATHEMATICS EDUCATION SOFTWARE

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The next generation mathematics education software should take advantages of the state-of-the-art research in the fields of automated reasoning. The new tools should be able to automatically solve different sorts of mathematical problems, provide understandable solutions, guide the users through the solving process, check if their solutions are correct, provide an appropriate support for interactive theorem proving, etc. In this talk, we will discuss these and other challenges for the next generation mathematics education software, primarily for geometry. For geometry education software, some of the specific challenges are defining appropriate foundations for high-school geometry, automated proving of theorems with human-readable proofs, automated solving of construction problems, linking theorem proving with dynamic geometry tools, automated discovery of theorems, automated discovery of loci, etc.