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Complexity of computations and cryptography.

Applications of mathematical methods to cryptography is one of the most rapidly developing areas of interdisciplinary research which attracts a lot of interest among mathematicians across the borders. Current situation with information security unambiguously indicates that such interest will be just getting stronger in the years to come. In this talk I am going to discuss the feedback, the increasing influence of new methods and ideas coming to mathematics from modern information technologies, the quest for paradigm change that we are experiencing now. It seems that we are going to witness some fundamental changes in our perception of algorithmic mathematics in the very near future. What are these changes, what kind of new interesting problems arise here, what is the role of "experimental mathematics" (if any) - these are the questions I would like to touch on.