Title: Elliptic curves - where Fermat meets Langlands
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Abstract: Fermat's last theorem asserts that the equation x^n + y^n = z^n has no nontrivial integer solutions for any exponent n>2. While its statement is purely number theoretic, its proof surprisingly requires tools from algebraic geometry and complex analysis. In this talk, we discuss a very brief overview of what these tools are and how they come into the proof of Fermat's last theorem. In addition, we describe how Fermat's last theorem can be realized as a special case of the Langlands program, often referred to as a grand unification theory in mathematics, and give a brief introduction to research at UA in this program.