

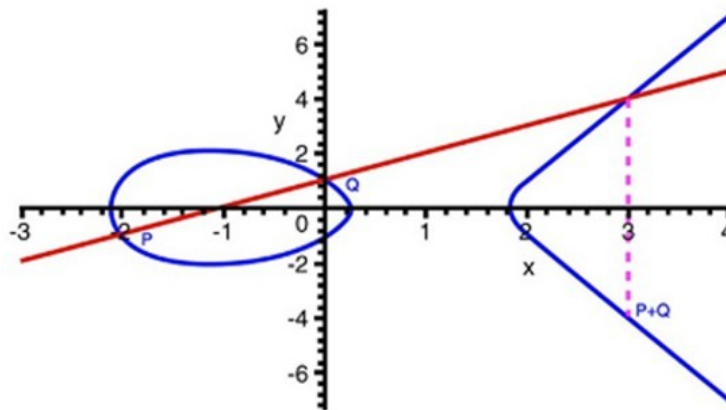
# The SUMO Speaker Series for Undergraduates (380W this week!)

Thursday, December 4th

4:15-5:05, room 380W

(Food Provided)

Fermat's Last Theorem and Elliptic Curves



Professor Brian Conrad

## Abstract:

When Wiles solved FLT in 1993, he deduced it from a general theorem that he proved about a class of curves called elliptic curves. These curves are not ellipses, and they play an important role throughout modern number theory. Curiously, there is an entirely different (and more elementary!) way in which elliptic curves related to FLT, by giving a conceptual explanation for what is going on in Fermat's proof of his "Last Theorem" for exponent 4 (the only case he proved, by clever algebraic manipulations).

We will explain what elliptic curves are, where they come from, and then use them to re-interpret some of the early mysterious proofs of special cases of FLT in more conceptual terms

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