

# MATHEMATICS RESEARCH SEMINAR

3:30-4:30 October 14, 2005

104 University Hall

## THE MAGIC OF ELLIPTIC CURVES, III

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*ABSTRACT:* Continuing the colloquium talk, we will discuss more details of the connection between quadratic imaginary fields and elliptic curves. The theory of complex multiplication is one of the most elegant classical theories about elliptic curves, by which the connection of these two seemingly unrelated things are explained. This theory was first sensed by Abel, and developed by Kronecker, Hasse, and Deuring for a period of a hundred years. This analytic theory on elliptic curves gave birth to modular forms which are one of the central topics in modern number theory.