

Mathematics Student Colloquium

Prof. Robert Sczech

**The Quadratic Reciprocity
Law – Two Proofs Given
by Eisenstein**

Abstract: The quadratic reciprocity law is a basic result in elementary number theory. It was first stated by Legendre and Euler, but the first complete proof was given by Gauss. Over the years, this result turned out to be very important for the development of modern number theory. In fact, a full generalization of the quadratic reciprocity law is one of the outstanding problems in modern number theory (Langlands program).

Among the more than 50 known proofs of the quadratic reciprocity law in the literature, I will present in my talk two classical proofs given by Eisenstein (a student of Gauss).

Wednesday, November 1

4-5pm

204 Smith Hall