

NUMBER THEORY & COMBINATORICS SEMINAR

Speaker: Brandon Fodden
Date: 2007 Sep 26
Time: 3:00 to 3:50 pm
Room: L-1112
Title: Diophantine equations and the generalized Riemann hypothesis

Abstract:

We show that the statement “for all number fields K , the generalized Riemann hypothesis for K holds” is equivalent to a statement of the form “for all natural numbers n , property P holds” where P is a decidable property of the natural numbers (that is, there is an algorithm which will tell if P holds for an arbitrary natural number in finitely many steps). This in turn implies that the original statement is equivalent to the unsolvability of a particular Diophantine equation in the integers.