

p-adic Numbers and Their Uses in Number Theory

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Abstract

This talk is meant for a general mathematical audience. It will introduce the p-adic numbers and describe some of the ways they have been used to resolve a variety of problems in number theory, including - as time permits - describing the zero set of a recursion sequence, understanding rational points on curves, proving modularity of elliptic curves, and studying special values of L-functions.

Prerequisites: basic algebra, elementary number theory