

EXPLICIT METHODS IN NUMBER THEORY

Abstract

The aim of this Oberwolfach meeting on ‘Explicit methods in number theory’ is to bring together people attacking key problems in number theory via techniques involving concrete or computable descriptions. We plan to have a series of lectures on the recent breakthroughs in the distribution of class groups and Selmer groups, including generalizations of the Cohen–Lenstra heuristics and applications to elliptic curves, but there will also be other lectures in number theory interpreted broadly, including algebraic and analytic number theory, Galois theory and inverse Galois problems, arithmetic of curves and higher-dimensional varieties, zeta and L-functions and their special values, and modular forms and functions. Considerable attention is paid to computational issues, but the emphasis is on aspects that are of interest to the pure mathematician.