ICM 1998, Berlin, Aug. 18–27

Abstracts of Plenary and Invited Lectures

Section:

7. Lie Groups and Lie Algebras

1991 MS Classification: 22 11
Eskin, Alex, University of Chicago, USA
Counting problems and semisimple groups

Some natural counting problems admit extra symmetries related to actions of Lie groups. For these problems, one can sometimes use ergodic and geometric methods, and in particular the theory of unipotent flows, to obtain asymptotic formulas.
We will present counting problems related to diophantine equations, diophantine inequalities and quantum chaos, and also to the study of billiards on rational polygons.