

## Abstract

The conference *Geometric Structures in Group Theory* is located in the area of geometric group theory and its connections and applications to other mathematical fields. It will focus on aspects that either saw recent important and exciting advances, or that maintained their status of mainstream directions of research. These aspects can be classified broadly in the three themes below that have developed rapidly in recent years. These themes would benefit greatly from being brought together in the same conference with a view to fostering further interaction:

- (1) Finite structures reflecting on infinite structures
  - Profinite groups, rigidity phenomena
  - Expanders
- (2) Significant infinite structures
  - Special (cube) complexes in connection with low-dimensional topology and geometry
  - Buildings, totally disconnected groups
  - Geometries associated to automorphism groups of free groups and to mapping class groups
  - Proper actions on important classes of metric spaces (CAT(0) spaces, Banach spaces) and the fixed point property
- (3) Probabilistic methods for studying both finite and infinite structures
  - Random walks on groups
  - Random graphs and random groups