Abstract. Topics discussed at the workshop Quadratic forms and linear algebraic groups included besides the algebraic theory of quadratic and Hermitian forms and their Witt groups several aspects of the theory of linear algebraic groups and homogeneous varieties, as well as some arithmetic aspects pertaining to the theory of quadratic forms over function fields over local fields.


Introduction by the Organisers

The workshop was organized by Detlev Hoffmann (Nottingham), Alexander Merkurjev (Los Angeles), and Jean-Pierre Tignol (Louvain-la-Neuve), and was attended by 50 participants. Funding from the Leibniz Association within the grant “Oberwolfach Leibniz Graduate Students” (OWLG) provided support toward the participation of five young researchers. Additionally, the “US Junior Oberwolfach Fellows” program of the US National Science Foundation funded travel expenses for two post docs from the USA.

The workshop followed a long tradition of Oberwolfach meetings on algebraic theory of quadratic forms and related structures. In the last 15 years the algebraic theory of quadratic forms was greatly influenced by methods of algebraic geometry and linear algebraic groups.

The schedule of the meeting comprised 21 lectures of 45 minutes each. Highlights of the conference include recent progress of the application of the patching
principle, progress on the Grothendieck-Serre conjecture, and the solution of the problem on excellent connections in the motive of a quadratic form.

In his lecture, J-P. Serre remarked that he had given his first talk in Oberwolfach in 1949.