

MATHEMATISCHES FORSCHUNGSINSTITUT OBERWOLFACH

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Groups and Geometries

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ABSTRACT. The workshop *Groups and Geometries* was one of a series of Oberwolfach workshops which takes place every 3 years. It focused on finite simple groups, Lie-type groups and their interactions with geometry.

Mathematics Subject Classification (2000): 20D06, 20D08, 20G15, 20G40, 51N30, 51E12, 51E24.

Introduction by the Organisers

The workshop *Groups and Geometries* was one of a series of Oberwolfach workshops which takes place every 3 years. It focused on finite simple groups, Lie-type groups and their interactions with geometry.

There were 47 participants and 25 talks. The themes of the latter centered around the classification of the finite simple groups and its applications, simple algebraic groups and group-theoretic applications of Moufang buildings. There were several 1-hour talks describing recent major results concerning these topics. For instance, D. Segal gave a talk about a proof of a long standing conjecture on finitely generated pro-finite groups which uses the classification. The topic of B. Martin's was the answer to a question of Serre about the notion of complete reducibility for algebraic groups. R. Weiss determined the Whitehead group for certain algebraic groups of type E_6 and E_7 as an application of his new approach to exceptional Moufang quadrangles. There had been also important contributions by young participants. For instance, by D. Bundy on the $C(G, T)$ -theorem, by P.-E. Caprace on the solution of the isomorphism problem for Kac-Moody groups, by T. De Medts on rank-1 groups and by R. Gramlich on local recognition.

The conference showed that the theory of simple groups and their geometries is a very active area and that there is a lot of interaction with an increasing number of other areas. There is in particular growing impact of algebraic groups on the

theory of finite groups. One of the aims of the conference was, to bring together people from these different areas, so that they can speak with each other and possibly work together on common problems. This interaction was indeed very lively and thus the meeting stands in the tradition of very successful meetings on *Groups and Geometries* at Oberwolfach.