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Edited by C. M. Campbell and E. F. Robertson

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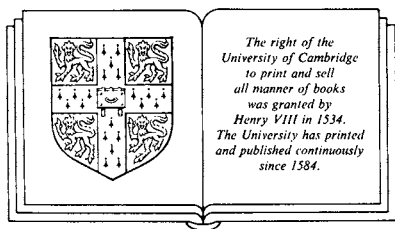
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and
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PREFACE

This is the second of two volumes of the Proceedings of Groups - St Andrews 1989. There is a full contents of both volumes and those papers written by authors with the name of the first author lying in the range H-V. Contained in this part are the papers of three of the main speakers namely O H Kegel, A Yu Ol'shanskii and J G Thompson. Kegel's article is written up jointly with D Schmidt while Ol'shanskii's article is written up jointly with his colleague A Ivanov. We would like especially to thank these main speakers for their contributions both to the conference and to this volume.

INTRODUCTION

An international conference 'Groups - St Andrews 1989' was held in the Mathematical Institute, University of St Andrews, Scotland during the period 29 July to 12 August 1989. A total of 293 people from 37 different countries registered for the conference. The initial planning for the conference began in July 1986 and in the summer of 1987 invitations were given to Professor J A Green (Warwick), Professor N D Gupta (Manitoba), Professor O H Kegel (Freiburg), Professor A Yu Ol'shanskii (Moscow) and Professor J G Thompson (Cambridge). They all accepted our invitation and gave courses at the conference of three or four lectures. We were particularly pleased that Professor Ol'shanskii was able to make his first visit to the West. The above courses formed the main part of the first week of the conference. All the above speakers have contributed articles based on these courses to the Proceedings.

In the second week of the conference there were fourteen one-hour invited survey lectures and a CAYLEY workshop with four main lectures. In addition there was a full programme of research seminars. The remaining articles in the two parts of the Proceedings arise from these invited lectures and research seminars.

The two volumes of the Proceedings of Groups - St Andrews 1989 are similar in style to 'Groups - St Andrews 1981' and 'Proceedings of Groups - St Andrews 1985' both published by Cambridge University Press in the London Mathematical Society Lecture Notes Series. Rather

than attempt to divide the two parts by an inevitably imprecise division by subject area we have divided the two parts by author name, the first part consisting of papers with author names beginning A-G and the second part author names beginning H-V.

A feature of these volumes is the number of surveys written by leading researchers, in the wide range of group theory covered. From the papers an extensive list of references may be built up and some of the diversity of group theory appreciated.

The computing aspect of group theory was catered for in several ways. As mentioned above there was a series of lectures on CAYLEY and a CAYLEY workshop; there was also a lecture on GAP. Participants were also given access to the Microlaboratory equipped with MAC's, to the University of St Andrews VAX's and to a SUN 3/260 running a wide range of software including CAYLEY, GAP, SPAS and SOGOS. All these facilities were well used by the conference participants.

Groups - St Andrews 1989 received financial support from the Edinburgh Mathematical Society, the London Mathematical Society and the British Council. We gratefully acknowledge this financial support. We would also like to thank Cambridge University Press and the London Mathematical Society for their help with publishing.

We would like to express our thanks to all our colleagues who helped in the running of the conference and in particular Patricia Heggie, John O'Connor and Trevor Walker. We would also like to thank our wives

for their help and forbearance. We would like to thank Shiela Wilson for so willingly undertaking the daunting task of typing the two volumes of the Proceedings, having already typed the Proceedings of the previous two St Andrews conferences.

Our final thanks go to those authors who have contributed articles to these volumes. We have edited these articles to produce some uniformity without, we hope, destroying individual styles. For any inconsistency in, and errors introduced by, our editing we take full responsibility.

Colin M Campbell

Edmund F Robertson