

PREFACE TO THE FIRST EDITION

Although the Fields Medal does not have the same public recognition as the Nobel Prizes, they share a similar intellectual standing. It is restricted to one field — that of mathematics — and an age limit of 40 has become an accepted tradition. Mathematics has in the main been interpreted as pure mathematics, and this is not so unreasonable since major contributions in some applied areas can be (and have been) recognized with Nobel Prizes. The restriction to 40 years is of marginal significance, since most mathematicians have made their mark long before this age.

A list of Fields Medallists and their contributions provides a bird's eye view of mathematics over the past 60 years. It highlights the areas in which, at various times, greatest progress has been made. This volume does not pretend to be comprehensive, nor is it a historical document. On the other hand, it presents 22 Fields Medallists and so provides a highly interesting and varied picture.

The contributions themselves represent the choice of the individual Medallists. They are either reproductions of already published works, or are new articles produced for this volume. In some cases they relate directly to the work for which the Fields Medals were awarded. In other cases they relate to more current interests of the Medallists. This indicates that while Fields Medallists must be under 40 at the time of the award, their mathematical development goes well past this age. In fact the age limit of 40 was chosen so that young mathematicians would be encouraged in their future work.

The contribution of each medallist is in most cases preceded by the introductory speech given by another leading mathematician during the prize ceremony, a photograph and an up-to-date biographical notice. The introductory speech outlines the basic works of the medallist at the time of the medal and the reasons why it was awarded.

The Editors

PREFACE TO THE SECOND EDITION

It is a pleasure to present this second edition which includes new contributions, by the 1998 and 2002 medallists.

Most Fields medallists are still living and most of them in full scientific activity. However, in addition to Lars Ahlfors (who was the first medallist with Jesse Douglas in 1936), we were very sad to learn the more recent death of other medallists. Due to the cooperation of his daughter, Mrs Oka, we are pleased to include a work by Kunihiko Kodaira, 1954 medallist who died in 1997 (the year of the first edition of this volume). On the other hand, Laurent Schwartz and Rene Thom also died recently, after the first edition of this book. Both were great scientists who made remarkable contributions to mathematics and other domains of science, and also deeply influenced younger colleagues through their teaching (one of us, D.I., was e.g. a student of Laurent Schwartz at the University of Paris). Both had a warm personality which attracted many friends.

We would like to dedicate this second edition to them.

The Editors