

## PREFACE

This volume contains survey articles based on lecture series given by the authors at the Australian National University between July 2001 and June 2002. All but one were given in the seminar series of the Special Program on Spectral and Scattering Theory which was held at ANU from July to December, 2001. The exception is the article by Ben Andrews, which is based on lectures given in the regular geometry/analysis seminar at ANU during the first half of 2002. All the articles have an expository character, generally including either new results or very recently published material.

The Special Program on Spectral and Scattering Theory was an activity of the CMA, organised by Alan McIntosh and myself. The main activities of the Special Program were two National Research Symposia held during August and September, and a seminar series held on Tuesday and Thursday afternoons for the duration of the Program. A number of distinguished visitors in this field (about 16 in all) were invited to ANU for up to six weeks, to give either a series of lectures or symposium talks. The scope of the Program was interpreted broadly to include harmonic analysis, partial differential equations and operator theory as well as spectral and scattering theory.

On behalf of the CMA, I wish to thank the authors of these surveys for their contribution to the Special Program and to this volume of the Proceedings of the CMA. I also thank the CMA's administrative staff, Annette Hughes and Kate McKay, for their help in the smooth running of the Special Program, and Terry Tao for co-organising the National Research Symposia.

Each article in this volume was refereed.

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(Editor)

