

FOREWORD

In July 1990 a meeting on Quantum Structures was held in Adelaide. The meeting was in honour of Ian Ellery McCarthy on the occasion of his sixtieth birthday. Ian, who is currently Professor of Physics and Associate Director of the Electronic Structure of Materials Centre at Flinders University, has had an enormous influence on the development of physics and physicists within Australia. He has always been interested in and active in promoting good physics and good young physicists. He was also instrumental in establishing the physics department at Flinders University and ensuring that it was very successful in its research activities. Those of us who have known Ian for some time have always admired him for his great enthusiasm for physics, for Australian Rules Football and for life in general.

The meeting brought together many of Ian's colleagues, ex-students, present students, and even some 'grandstudents'. The unifying theme was 'quantum structures', since Ian's career has spanned many areas of quantum physics, ranging from field theory to nuclear physics, from atomic physics to molecular physics, and most recently to condensed matter physics. It is appropriate that the majority of those attending the meeting were theorists, but it is also a mark of Ian's character that there were a significant number of experimentalists present. Ian has always been interested in interacting with experimentalists, and these interactions have been extremely fruitful. We naturally look forward to much more physics from Ian, and to many more interactions with him.

The collection of essays in this volume results from that meeting. The contributors have all been influenced either directly or indirectly by Ian McCarthy, and this collection is published in his honour on the occasion of his sixtieth birthday. We are grateful to the many contributors, to the participants of the meeting, and to the *Australian Journal of Physics*, particularly its managing editor, Peter Robertson, for making it possible to publish this collection.

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Participants in the meeting on Quantum Structures at Flinders University in July 1990

