

PREFACE

It gives us great pleasure to present the first book comprised of the research papers written by the winners of the 2004 Hang Lung Mathematics Awards (HLMA). 2004 HLMA marked the inaugural competition jointly organized by the Department of Mathematics at The Chinese University of Hong Kong and Hang Lung Properties in Hong Kong in December 2004. It was a pioneering collaboration between the education sector (including the strong support from the Hong Kong Education City) and the business sector in the launching of a research-based mathematics competition in Hong Kong.

HLMA came from a long-held dream we have shared: we saw the need to establish a platform where young students could be given the opportunity to discover and nurture their potentials in high-level mathematics research beyond the normal school curriculum. It is our hope that HLMA can help cultivate an independent learning environment in Hong Kong, stimulate critical thinking and encourage creativity among students.

This book has compiled the research papers of the winners of the 2004 HLMA which have displayed a high level of academic standards in terms of methodology, originality and scholarship. We were impressed by the students' thirst for knowledge and their passion for mathematics throughout the competition.

We hope that through HLMA, students would be encouraged to explore the world of mathematics and science, and to continue to cultivate their strengths and realize their potentials to the fullest. We wish to take this opportunity to thank the editors for their tireless efforts and devotion in the editing process. Through the publication of this book, we hope we will continue to inspire a future generation of mathematicians, scientists and scholars.

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