

## PREFACE

We are pleased to present this collection of research papers written by the winners of the 2010 Hang Lung Mathematics Awards (HLMA). The 2010 HLMA marked the fourth occasion of this biennial mathematics research competition for secondary school students in Hong Kong since the inaugural one held in December 2004.

We are most gratified to see the ever growing enthusiasm among students and teachers in undertaking academic research in mathematics. Students have not only demonstrated creativity in the selection of research topic; they have also displayed remarkable ingenuity in applying mathematics to solve problems or prove a proposition.

The research papers of the winners of the 2010 HLMA presented a high level of academic standards in terms of scholarship, originality and methodology. We are most impressed by the students' thirst for knowledge and their passion for mathematics throughout the competition.

It is our hope that by encouraging secondary students to rise to the challenge of intellectual research, they will be inspired to go deeper and further in the pursuit of knowledge in mathematics and science, which serves as the foundation and gateway to almost all aspects in our daily lives.

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