PREFACE

It is a great honor for the journal Methods and Applications of Analysis to dedicate these two special issues to Professor George Papanicolaou of Stanford University on the occasion of his sixtieth birthday. These two special issues consist of 21 articles from some leading experts in the field of applied mathematics, which cover a wide spectrum in analysis, numerics and applications.

Professor George Papanicolaou has been one of the most distinguished leaders in the field of applied mathematics in the past three decades. He has made many important contributions to various areas of applied mathematics including waves in random media, nonlinear waves, financial mathematics, and more recently imaging processing and time reversal. In particular, he is one of the pioneers in the mathematical study of effective properties of materials, which is now known as "homogenization" that has wide applications in the study of composite materials and complex fluids. George also had a greater impact on developing and applying stochastic techniques to understand and quantify a broad range of phenomena throughout the physical, geophysical, biological, engineering, industrial, and economic worlds. He has advanced modern applied mathematics in a unique and far reaching manner through his contributions and his deep influence on many researchers in these important areas. The papers in these two special issues are authored by students, collaborators, and friends of George, and the topics covered are closely related to George's researches.

We are grateful to all the distinguished authors who have contributed their significant articles to honor Professor George Papanicolaou's sixtieth birthday. Most of these authors are invited speakers for the "International Workshop on Nonlinear Waves" held in June 2004 at the Institute of Mathematical Sciences of the Chinese University of Hong Kong in the honor of Professor George Papanicolaou. Thus we would also like to thank the organizers of this successful workshop for their hard work.

We would like to wish Professor George Papanicolaou a happy birthday at this special occasion.

Editors of MAA