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Combinatorial Matrix Theory and Generalized Inverses of Matrices



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Foreword

The success of a conference has to be evaluated by the quality of the scientific presentations and the ability of the organizers to publish the proceedings. If this is the yardstick used, I reckon the International Conference on Combinatorial Matrix Theory and Generalized Inverses of Matrices makes the grade easily.

I congratulate the Department of Statistics, Manipal University, on the successful conduct of the conference and the publication of the proceedings.

Manipal, India

Dr. H. Vinod Bhat

Preface

The International Workshop and Conference on Combinatorial Matrix Theory and Generalized Inverses of Matrices-2012 was organized by the Department of Statistics, Manipal University, Manipal, India. There were more than 100 registered participants for both of the workshop and conference and 22 invited speakers representing 12 nations across the globe. Two-day conference consisted of four plenary sessions. Invited papers and contributed papers were presented in three parallel sessions dedicated, respectively, to the branches of "Combinatorial Matrix Theory," "Generalized Inverse of Matrices," and "Matrix Methods for Statistics." The international workshop and conference on CMTGIM provided a delightful and fruitful opportunity for all Indian and foreign mathematicians and statisticians at all levels of experience to interact in person and exchange ideas.

"Combinatorial Matrix Theory and Generalized Inverses of Matrices" is being published in an attempt to document the recent developments in the areas discussed at the conference. This book contains about 18 research and expository articles from different speakers and their collaborators. Only the selected articles, after the refereeing process, were retained for the inclusion in this volume. A report on the workshop and conference is presented as an appendix, covering narrative photographs and messages from the Pro Vice-Chancellor, Joint Secretary, CSIR, and the Director General, CSO.

New Delhi, India Maynooth, Ireland Manipal, India Tampere, Finland Ravindra B. Bapat Steve Kirkland K. Manjunatha Prasad Simo Puntanen

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We are grateful to all patrons of the conference and the Chairman of organizing committee Dr. H. Vinod Bhat, Pro Vice-Chancellor, MU, for their consistent support. Also, we thank Dr. N.S.K. Nair, the Head of the Department, and other faculty members of the Department of Statistics for their active involvement in the conduct of conference.

Our sincere thanks are also due to the National Board of Higher Mathematics (NBHM), the Central Statistics Office (CSO) Ministry of Statistics and Programme Implementation, the Council of Scientific and Industrial Research (CSIR), and the International Center for Theoretical Physics (ICTP) for their financial support.

Assistance of K.S. Mohana, Santhi Sheela and M. Vinay in compiling this volume was incredible, and we proudly applaud their effort.

Finally, we thank the team at Springer for their cooperation at all stages of publishing this volume.

September 2012

Ravindra B. Bapat Steve Kirkland K. Manjunatha Prasad Simo Puntanen

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