

प्रज्ञानं ब्रह्म



INSPIRED BY LIFE

International Workshop and Conference on Combinatorial Matrix Theory and Generalized Inverses of Matrices

02-07 January, 2012 and 10-11 January, 2012



MANIPAL
UNIVERSITY

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first come/registered first serve basis. Organizers' discretion is final in this regard. Participant may have to provide a letter from the parent organization regarding the non-availability of the financial support in order to get travel support.

All invited speakers are given local hospitality including accommodation. Further, Indian speakers are given travel support, if necessary.

COMMITTEES FOR CMTGIM WORKSHOP & CONFERENCE, JANUARY 2012

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Organizing Secretariat

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About the Manipal University (Formerly known as 'Manipal Academy of Higher Education' or MAHE)

Manipal University (MU) has been imparting world class education for over 57 years. Located at the rocky yet lush green hinterland of Malabar Coast, students from across the world, more than 50 countries are studying here. The University has created an ecosystem of teaching and research excellence, making it a universally accepted destination by students. Today MU has 21 constituent institutions, over 250 discipline comprising nursing, medical, dental, pharmacy, allied health, engineering, management, communication, hospitality etc. spread over 600 acres of green expanse. MU is home for about 20,000 students pursuing undergraduate and postgraduate programs in diverse subjects. MU has branch campuses in Bangalore, Mangalore, Malaysia, Dubai and Antigua in the Caribbean Island. For more details kindly log on to <http://www.manipal.edu/>

About the Statistics Department

The Department of Statistics was established in August 1, 2006 and offering numerous major and minor in Statistics to post graduates and under graduates of various applied science courses. The department has fostered by encouraging a liaison with other departments for research methodology, epidemiology and data analysis. Students are actively encouraged to become familiar with statistical computing, prepare research protocols and reports and facing the statistical problems. The department offers courses in M.Sc. Biostatistics (4 semesters), Certificate course in Biostatistics, Epidemiology & Research Methodology (6 months) and Doctoral Programs. The department also conducts a continuing executive education programme for Biostatisticians working with industry. The department provides full expertise in the curriculum development and training in Biostatistics for Master in Public Health program. For more details kindly log on to <http://www.manipal.edu/Institutions/UniversityDepartments/Statistics/Pages/Welcome.aspx>

About the Workshop and the Conference

Generalized Inverses of Matrices and Combinatorial Matrix Theory have established themselves as very important branches of Matrix Theory, having applications in several branches of science. Developments in theory of generalized inverse resulted from applications in areas such as Statistics, Error Analysis, Electrical Engineering, Digital Signal Processing, Pattern Recognition, Neural Network, Markov chains and Magic Squares to name a few. Advances in combinatorial matrix theory were motivated by a wide range of subjects such as Networks, Chemistry, Genetics, Bioinformatics, Computer Science and Information Technology, etc. The two areas interact with each other, which is evident from the interplay between graphs and matrices. Generalized inverses of



leading mathematicians and applied mathematicians to come together.

The main objective of the workshop to be held during 02 – 07 January 2012 is to provide a solid foundation and motivation, to pursue research and teaching in the frontline area of “Matrix Theory and its Applications” with a special emphasis on theory and applications of “Combinatorial Matrix Theory and Generalized Inverses of Matrices” (CMTGIM). The workshop is aimed at providing a platform for the young brains (students at Master's level, research scholars and young scientists) to work together and have an exposure to lectures delivered by leading mathematicians across the world. Workshop consists of regular lecture sessions, tutorials and problem solving sessions. Special lectures on frontline research areas in the subject by eminent speakers from India and abroad will be arranged in the workshop.

Topics covered in workshop are

- (i) Combinatorial Matrix Theory and Applications
- (ii) Generalized Inverses of Matrices and Applications
- (iii) Linear Models & Error Analysis

The International Conference on the same theme, to be held during 10 – 11 January 2012, is in continuation of the workshop, aimed at providing a platform for leading mathematicians and applied mathematicians working in the area to come together and discuss several research issues related to the theme of “Combinatorial Matrix Theory and Generalized Inverses of Matrices” and their applications. The Conference will consist of plenary talks, invited talks and contributed talks.

Few among Invited Speakers already given their consent of participation are

- Dr. R. B. Bapat, Indian Statistical Institute, New Delhi
Dr. K. P. S. Bhaskara Rao, Indiana State University, Terrehaute, USA
Dr. R. Bhatia, Indian Statistical Institute, New Delhi
Dr. S. Cioaba, University of Delaware, USA
Dr. C.R. Johnson, College of William & Mary, Virginia, USA
Dr. S. K. Jain, Ohio University, Athens, USA
Dr. S. Kirkland, National University of Ireland Maynooth, Ireland
Dr. S. Krishnan, IIT Bombay, Mumbai, India
Dr. S. Pati, IIT Guwahati, Guwahati, India
Dr. S. Puntanen, University of Tampere, Finland
Dr. G. P. H. Styan, McGill University, Canada
Dr. J. H. Werner, University of Bonn, Germany

matrices such as the incidence matrix and the Laplacian matrix are mathematically interesting and have great practical significance.

The Workshop and the Conference are aimed at intensive discussions on these subjects and to introduce new innovations by providing a forum for

Dr. Yimin Wei, Fudan University, Shanghai, China
Dr. Yongge Tian, Central University of Finance & Economics, Beijing, China

Registration

Application for registration with all relevant information may be submitted online before 15th August 2011. On confirmation of acceptance of your application, the participant may pay the registration fee online or by DD and register for the workshop and/or conference. For further details, kindly log on to <http://www.cmtgim2012.org>

Registration Fee for Workshop*

Participants from Industries:	INR 10,000/-
Indian Participants from Academic Institutions other than Students:	INR 5,000/-
Indian Student* Participants:	INR 2,000/-
Participants from abroad:	US\$ 250
Student* Participant from abroad:	US\$ 150

Workshop participants are not charged any fee for attending the conference to be held later.

* Applicable only for selected M.Sc. or M.S. students and full time research students not receiving any financial support. Recommendation from Head of the department / Professor / Research Supervisor is necessary with application.

Registration Fee for only Conference

Participants from Industries	: INR 5,000/-
Indian Participants from Academic Institutions	: INR 2,000/-
Participants from abroad	: US\$ 250

Important Dates

Last Date for Submission of Application	: 15 th August, 2011
Last Date for Abstract of Contributed Paper	: 30 th August 2011
Notification of Acceptance	: 15 th September 2011
Last Date for Submission of Registration	: 30 th October 2011
Last Date for Submission of Completed Contributed Paper	: 15 th November 2011

Venue: Manipal University Campus, Manipal

Facility & Support to be provided

Local hospitality & accommodation will be arranged for all the participants by the organizer. Essential support, if necessary, to find alternative accommodation shall be given on request. Travel support by the shortest route (AC III) for limited number of Indian participants shall be given if the participant is unable to obtain such facility from their own organization and this facility is subject to availability of fund support. As the support from organizer may be limited to a number of participants, travel support is given on