

**A report  
on  
International Conference on Discrete Mathematics and its  
Applications to Network Science  
(ICDMANS 2018)**

July 07 - 10, 2018

**(Sponsored by NBHM, DRDO and HMEL)**



Discrete Mathematics provides the underpinnings of most of fields in Network Science. Problems in many areas of discrete mathematics, such as combinatorics and graph theory, naturally lend themselves to algorithmic techniques. This has fuelled much research in discrete mathematics and network science, including that being carried out in the departments of Mathematics and Computer Science in various institutions all over the country and in several leading institutions outside the country.

Network science is the study of network representations of physical, biological, and social phenomena leading to predictive models of these phenomena. The field draws on theories and methods including graph theory from mathematics, statistical mechanics from physics, data mining and information visualization from computer science, inferential modeling from statistics, and social structure from sociology and social psychology.

Department of Mathematics BITS Pilani K K Birla Goa Campus organized the conference ICDMANS 2018 during July 7-10, 2018. The purpose of this conference was to bring together experts and young researchers and provide a platform for discussion of recent advances in the relevant research areas and presentation of research papers by young scientists. Apart from invited talks by leading experts in the field

and presentation of research papers by other delegates, informal interactive sessions have been arranged to give the opportunities for young researchers to interact with the leading experts in the field.

**Topics covered in the conference include:**

Discrete Mathematics	Graph Theory
Combinatorics	Algorithms
Combinatorial Optimization	Computational Biology & Bio Informatics
Social Networks	Network Security
Network Science	Neural Networks
Cryptography	

**Invited Speakers from Abroad:**

- Jay S. Bagga (Ball State University, USA)
- G.L. Chia (Universiti Tunku Abdul Rahman, Malasiya)
- Kiki A. Sugeng ( Universitas Indonesia, Indonesia)
- Tao-Ming Wang (Tunghai University Taiwan)
- A.M. Hinz (University of Munich, Germany)
- Martin Baca (Technical University of Kosice Slovak Republic)
- Andrea Fenovcikova (Technical University of Kosice Slovak Slovak Republic)

**Invited Speakers from India:**

- B.S. Panda (IIT Delhi)
- S. Pirzada (University of Kashmir)
- B.N. Waphare (University of Pune)
- Amitava Bhattacharya (TIFR Bombay)
- A. Vijayakumar (CUSAT, Cochin)
- Aparna Ranjith (Aluva, Cochin)
- S. Arumugam (n-CARDMATH, KLU)
- Deepa Sinha (SAU Delhi)
- Mukti Acharya (DTU, Delhi)
- Manoj Changat (University of Kerala)
- R.P. Joshi (BITS Goa)
- Krishnendra Shekhawat (BITS Pilani)
- A. Somasundaram (BITS Dubai)
- Veeky Baths (BITS Goa)
- S. Lavanya (IIT, BHU)
- Rishi Ranjan Singh (IIT, Bhilai)

Around 100 delegates from India and other countries like, Germany, Slovakia, USA, Taiwan, Indonesia participated in the conference. Total 67 paper presentations were done during the conference.

Prof. Tarkeshwar Singh was the Conference Chair. Dr. Anil Kumar, Dr. Manoj Kumar Pandey, Dr. J. K. Sahoo, Dr. G C Samanta, Dr. Bijil Prakash and research scholars; Adarsh Handa, Aloysius Godonho, Parth Shah, Pabitra Kumar P, Ritu Dhankar and others assisted on logistic part of it.