International Symposium on Computational Operations Research and Algorithmic Game Theory

Program Overview

Inaugural Session Details

March 29, 2021 Time: 13:30 -14:00

Welcome address, Opening Remarks, About symposium, Vote of Thanks

Invited Sessions Details

March 29, 2021 Time: 14:00 -16:15 (IST)

Invited Session I

Chairman: S K Neogy, Indian Statistical Institute New Delhi.

1.	Max Klimm (Technische Universität Berlin, Institut für Mathematik, Germany),
	Parametric Flow Algorithms,
2	Bo Chen (The University of Warwick, UK) Atomic Dynamic Flows: Adaptive
	versus Non-adaptive Agents
2.	Michal Feldman (Blavatnik School of Computer Science at Tel-Aviv University,
	Israel) Prophet and Secretary Online Algorithms for Matching in General Graphs

Tea Break: 16:15-16:30

March 29, 2021 Time: 16:30 -18:00 (IST)

Invited Session II

Chairman: R B Bapat, Indian Statistical Institute New Delhi.

- 1. Agnieszka Wiszniewska-Matyszkiel (Institute of Applied Mathematics and Mechanics, University of Warsaw)"The Tragedy of the Commons" in the dynamic context
- 2. Reinoud Joosten & Rogier Harmelink (University of Twente, The Netherlands)
 Tipping and strong rarity value in a stochastic fishery game

Tea Break: 18:00-18:10

March 29, 2021 Technical Session I 18:10-19:00

Chairman: S K Neogy, Indian Statistical Institute New Delhi.

1.	Gambheer Singh (University of Delhi) On classes of N-matrices and Nbar-matrices
	with Q-property

- 2. Sushmitha P (Indian Institute of Technology, Madras) Some extensions of the Q-matrix class
- 3. Vatsalkumar N. Mer (Indian Statistical Institute New Delhi) Linear preservers of semipositive matrices

March 30, 2021 Time: 10:00 -11:30 (IST)

Invited Session III

Chairman: S K Neogy,, Indian Statistical Institute New Delhi.

KS Mallikarjuna Rao, (Indian Institute of Technology Bombay)
 Combined Lifting and Penalization Approach to Mathematical Programs with Complementarity Constraints

 Yasunori Kimura (Toho University, Japan) Fixed point problems and approximation techniques of its solutions on geodesic spaces

Tea Break: 11:30-11:45

March 30, 2021 Time: 11:45 -13:15 (IST) Invited Session IV

Chairman: R.B. Bapat, Indian Statistical Institute New Delhi.

- 1. **T. Parthasarathy (Chennai Mathematical Institute, Chennai, India)** Bimatrix bistochastic games with completely mixes equilibrium
- 2. Sandeep Juneja (Tata Institute of Fundamental Research, Mumbai, India)
 Shift and Scale Approach to Speed up Epidemiological Agent Based Simulation
 Models

Lunch Break: 13:15 -14:00March 30, 2021 Time: 14:00 -16:15 (IST)

Invited Session V

Chairman: S K Neogy, Indian Statistical Institute New Delhi.

- 1. Martin Hoefer, (Goethe-Universität Frankfurt am MainInstitut für Informatik, Germany), Algorithms for Recommendation Problems
- 2. **K.C. Sivakumar (Indian Institute of Technology Madras, India)** Tucker's theorem for almost skew-symmetric matrices.
- J Dutta, (Indian Institute of Technology Kanpur) A Proximal Gradient Method for Multi-objective Optimization Problems using Bregman Functions.

Tea Break: 16:15-16:30

March 30, 2021 Time: 16:30 -18:00 (IST)

Invited Session VI

Chairman: R B Bapat, Indian Statistical Institute New Delhi.

1.	S Dharmaraja (Indian Institute of Technology Delhi) Markov Regenerative Credit
	Rating Model

2. **S K Mishra** (**Institute of Science, Banaras Hindu University**) On q-Steepest Descent Algorithm for Unconstrained Multiobjective Optimization Problems

March 30, 2021 Technical Session II 18:00-19:00 (IST)

Chairman: S K Neogy, Indian Statistical Institute New Delhi.

1.	G. Ganesan (Institute of Mathematical Sciences, Chennai) Computing Prices for
	Target Profits in Contracts
2	

- 3. Ankur Garg, Y. Agarwal, R. K. Srivastava, S. K. Jakhar (Indian Institute of Management Lucknow) Application of Benders Decomposition for solving an Integrated Model for Schedule Design, Aircraft Rotation and Crew Scheduling in Airlines.
- 4. **Lokesh Kumar Bhuranda**, Mohd. Rizwanullah (Manipal University Jaipur)
 Stochastic Optimization of Multi-Capacitated Vehicle Routing Problem with Pickup and Delivery using Saving Matrix Algorithm

March 31, 2021 Time: 10:00 -11:30 (IST)

Invited Session VII

Chairman: R.B.Bapat,, Indian Statistical Institute New Delhi.

- 1. **Masahiro Hachimori** and Yumi Yamada (**University of Tsukuba, Japan**) On the distribution of the roots of Ehrhart polynomials for dual pairs of polytopes
- 2. Shinya Fujita, Boram Park, **Tadashi SAKUMA**, (**Yamagata University**, **Japan**.) Stable Structure on Safe Set Problems in Vertex-Weighted Graphs II –Recognition and Complexity–

Tea Break: 11:30-11:45

March 31, 2021 Technical Session III Time: 11:45 -13:15 (IST)

Chairman: K.M. Prasad, Centre for Advanced Research in Applied Mathematics and Statistics, MAHE

1.	Bhawna Kohli (P.G.D.A.V. College, University of Delhi) Some calculus
	rules, generalized convexity via convexifactors and their applications to optimization"
	for presentation
2.	Monu, L.N. Das, (Delhi Technological University, New Delhi) Selected Delhi
	Transportation Routing Bus Scheduling
3	Akash Jain, Anjana Gupta (Delhi Technological University, New Delhi) Solving
	Game Theory problem with the help of newly proposed Mayfly Algorithm
4	Rajesh Kumar Mishra, Vinod Kumar Mishra (Madan Mohan Malaviya University of
	Technology Gorakhpur, UP, India) Inventory decisions within an inventory model for
	joint complementary and substitutable items with substitution cost.
5	joint complementary and substitutable items with substitution cost. M. Sathya (Meenakshi College for women) Time Table scheduling using graph
5	
5	M. Sathya (Meenakshi College for women) Time Table scheduling using graph

Lunch Break: 13:15 -14:00

March 31, 2021 Time: 14:00 -16:00 (IST)

Invited Session III

Chairman : S K Neogy, Indian Statistical Institute New Delhi.

1.	Pankaj Gupta (University of Delhi, India) Impact of COVID-19 on Supply Chain
	Operations in India: An NLP Approach
	S.C. Malik (M.D. University, Rohtak) A New Approach for Reliability Analysis of
	Transformed Systems with Different Structures
2	Dipti Dubey (Shiv Nadar University) On Hilbert Basis and Integral Solutions of
	Linear Complementarity Problem

Tea Break: 16:00-16:15

March 31, 2021 Time: 16:15 -17:15 (IST) Technical Session IV

Chairman:, K.M. Prasad, Centre for Advanced Research in Applied Mathematics and Statistics, MAHE.

1.	Nomita Pachar, Anshu Gupta, P.C. Jha, (Department of Operational Research,
	University of Delhi), Integrated Centralised Decentralised Resource Reallocation
	Strategy based on DEA for Improving Sustainable Performance: A Case Study of
	Supermarket Retail Firm
2.	Akansha Jain, Jyoti Dhingra Darbari, P. C. Jha, (Department of Operational Research,
	University of Delhi), Supply Chain Restructuring for Omni-Channel Retailing: A
	Procurement-Distribution Planning Framework
3	Jyoti Dhingra Darbari, Shiwani Sharma , P. C. Jha (Department of Operational
	Research, University of Delhi), Multi-objective Modelling approach for Sustainable
	Reverse Supply Chain Network Planning and 3PRLP Selection

4 Aditi, Jyoti Dhingra Darbari, P.C. Jha (Department of Operational Research, University of Delhi, India), Bi-Objective Optimization Model for Sustainable Supplier Selection considering Trade-off between Supplier Development and Supplier Switching

Tea Break: 17:15-17:30

March 31, 2021 Time: 17:30 -18:30 (IST) Technical Session V

Chairman:, S. K. Neogy, Indian Statistical Institute New Delhi.

1	Rashi Sharma, Jyoti Dhingra Darbari, P.C. Jha (Department of Operational Research,
	University of Delhi, India), Group Consensus Reaching Model for Sustainable Tier I
	Supplier Evaluation and Selection in a Multi-Tier Food Supply Chain
2.	Pankaj, Aditi, Arshia Kaul, Rubina Mittal(Department of Operational Research,
	University of Delhi, India) Identification of Challenges to Implement Industry 4.0 and
	Circular Economy: A Case of an Indian MSME
3	Ranu Singh, Vinod Kumar Mishra (Madan Mohan Malaviya University of
	Technology, Gorakhpur, U.P, India)Joint Optimal ordering policies for non-
	instantaneous substitutable deterioration products with carbon emission and cost of
	substitution
4	Pratiksha Saxena, Chaman Singh, Kamna Sharma (Gautam Buddha University,
	Greater Noida, Uttar Pradesh, India) Green Design and product stewardship approach
	for two warehouse inventory model.
5.	Mahendra Kumar Gupta (National Institute of Technology Jamshedpur), N. K.
	Tomar, A, Kumar, Index one generalized observer design for linear descriptor
	systems with unknown inputs