

# 2017 Symposium on Mathematical Programming and Game Theory Program Overview

## Inaugural Session Details

**January 9, 2017      Time: 10:00 -10:30    Venue: Auditorium**

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

**Tea Break: 10:30 -11:00**

## Sessions Details

**January 9, 2017      Time: 11:00 -13:00    Venue: Auditorium**

### Invited Session I

**Chairman :** Reinoud AMG Joosten, University of Twente, The Netherlands.

1.	<b>T E S Raghavan</b> (University of Illinois at Chicago, USA) Graphical algorithms for locating the nucleolus of binary valued assignment games
2.	<b>Sandeep Juneja</b> (Tata Institute of Fundamental Research, India) Rest in the lounge or directly join the queue
3.	<b>Yasunori Kimura</b> (Toho University, Funabashi, Japan) Convex minimization problems and resonvents on geodesic spaces

**Lunch Break: 13:00 -14:00**

**January 9, 2017      Time: 14:00 -15:20    Venue: Auditorium**

### Invited Session II

**Chairman:** T E S Raghavan, University of Illinois at Chicago, USA

1.	<b>J. Dutta</b> (jointly with S. Dempe, N. Dinh, and T. Pandit ) (Indian Institute of Technology, Kanpur, India) Simple Bilevel Programming and Extensions : Theory and Algorithms
2.	<b>Sunil Chandran. L.</b> (Department of Computer Science and Automation, Indian Institute of Science, Bangalore) Separation Dimension of Graphs and Hyper Graphs.

**Tea Break: 15:20 -15:45**

**January 9, 2017 Time: 15.45 -17:30 Venue: Auditorium**

**Technical Session-I A**

**Chairman :** Agnieszka Wiszniewska-Matyszkiewicz, Institute of Applied Mathematics and Mechanics, University of Warsaw, Poland

1.	<b>Jitendra kumar Maurya</b> (Department of Mathematics, Institute of Science, Banaras Hindu University, Varansi, India), S. K. Mishra, Approximate Karush-Kuhn-Tucker condition in multiobjective smooth and nonsmooth pseudolinear optimization
2.	<b>Prasenjit Mondal</b> (Mathematics Department, Government General Degree College, Ranibandh, Bankura-722135, India) Algorithms for Solving Some Structured Classes of semi-Markov Game
3	<b>Izhar Uddin</b> (Department of Mathematics, JMI, New Delhi), J.J. Nieto, Javid Ali, Image Recovery Problem in Hadamard Spaces
4.	<b>Dharini Hingu</b> (Department of Mathematics, Indian Institute of Technology Madras, Chennai), K.S. Mallikarjuna Rao, A.J. Shaiju, On Superiority and Weak Stability of Population States
5	<b>Mansi Dhingra</b> (Department of Mathematics, University of Delhi, Delhi) C.S. Lalitha Set-valued optimization via improvement sets
6	<b>Meghana Dhayal</b> , Vidyottama Jain, S. Dharmaraja (Department of Chemical Engineering, IIT Delhi, New Delhi, India) Performance Analysis of Higher Education Institutions using DEA-TOPSIS Approach

**January 9, 2017 Time: 15.45 -17:30 Venue: Conference Room**

**Technical Session-I B**

**Chairman :** T. Parthasarathy, Chennai Mathematical Institute, Chennai, India

1.	<b>Pooja Gupta</b> (Department of Mathematics, Banaras Hindu University Varanasi, India), Vivek Laha, S.K. Mishra, Approximate efficiency via generalized approximate convexity
2.	<b>Mamata Sahu</b> (Delhi Technological University, India), Anjana Gupta, Incomplete intuitionistic multiplicative preference relations
3.	Haneefa Kausar, <b>Firoz Ahmad</b> (Department of Statistics and Operations Research Aligarh Muslim University, Aligarh, India), An Approach for Solving Bi-level Programming Problem of Banking Crisis Management under Uncertainty
4.	<b>Arshpreet Kaur</b> (Thapar University, Patiala, Panjab, India), Mahesh Kr. Sharma, Navdeep Kailey, Duality for a class of multiobjective fractional programming problems
5.	<b>Akhilesh Kumar</b> (Department of Applied Mathematics, Delhi Technological University, Delhi, India), Anjana Gupta, Aparna Mehra, Railways Decision Making Problem on Special Trains in a Bilevel Programming Framework
6.	<b>Rubi Arya</b> (MNIT Allahabad), Pitam Singh, Generating fuzzy efficient and $\epsilon$ - fuzzy efficient solution for multi-objective linear fractional programming problem

**January 10, 2017 Time: 10:00 -11:20 Venue: Auditorium**

**Invited Session III**

**Chairman: R. B. Bapat**

1.	<b>Masahiro Hachimori</b> (University of Tsukuba, Japan), Optimization on acyclic orientations of graphs, shellability of simplicial complexes, and related topics
2.	<b>Tadashi SAKUMA</b> (Yamagata University, Japan), Similarities and dissimilarities between the blocking and anti-blocking polyhedra

**Tea Break: 11:20 -11:40**

**January 10, 2017 Time: 11:40 -13:00 Venue: Auditorium**

**Invited Session IV**

**Chairman: T E S Raghavan, University of Illinois at Chicago, USA**

1.	<b>Reinoud Joosten</b> (University of Twente, The Netherlands), Robin Meijboom, Stochastic game with endogenous transitions
2.	<b>T. Parthasarathy</b> (Chennai Mathematical Institute, Chennai, India), Completely mixed stochastic games

**Lunch Break: 13:00 -14:00**

**January 10, 2017 Time: 14:00 -15:20 Venue: Auditorium**

**Invited Session V**

**Chairman: Masahiro Hachimori, University of Tsukuba, Japan**

1.	<b>Aparna Mehra</b> (Indian Institute of Technology Delhi, India) Portfolio selection for index tracking and enhanced indexing
2.	<b>S.K. Mishra</b> (Banaras Hindu University, India) Lagrange duality and saddle point optimality criteria for mathematical programming problem with equilibrium constraints via convexifiers

**Tea Break: 15:20 -15:45**

**January 10, 2017 Time: 15.45 -17:30 Venue: Auditorium  
Technical Session-II A**

**Chairman :** Joydeep Dutta, Indian Institute of Technology, Kanpur, India

1.	P. K Shukla, J. Dutta, K. Deb, <b>P. Kesarwani</b> (Department of Mathematics, Indian Institute of Technology Kanpur, India) On a Practical Notion of Geoffrion Proper Optimality in Multicriteria Optimization
2.	<b>Anusuya Ghosh</b> (Production and Operations Management, Indian Institute of Management Bangalore), Vishnu Narayanan, Construction of Semidefinite Representation of Convex Body in $\mathbb{R}^2$
3.	<b>Hamidur Rahman</b> (Indian Institute of Technology Bombay, Mumbai, India Ashutosh Mahajan) On the split-rank of the facets for mixed-integer bilinear covering set and their effective separation
4.	Suvra Kanti Chakraborty, <b>Sutanu Paul</b> (Department of Mathematics, Indian Institute of Technology Kharagpur, India), Geetanjali Panda, Modified Projected Newton Scheme for Nonconvex Function with Box Constraints
5.	<b>Srikant Gupta</b> (Aligarh Muslim University, India) Interactive Fuzzy Goal Programming for Agricultural land allocation problem Under Uncertainty
6.	<b>Kalpna Shukla</b> (Department Of Mathematics, GLA University Mathura, India) Properties of generalized Nondifferentiable multiobjective variational control problems with generalized convexity with its applications

**January 10, 2017 Time: 15.45 -17:30 Venue: Conference Room**

**Technical Session-II B**

**Chairman:** S. K. Neogy, Indian Statistical Institute, Delhi Centre

1.	<b>Anil Kumar Yadav</b> (Chhatrapati Shahu Ji Maharaj University Kanpur India) Analysis of Randomized Maximal Independent Set Problem
2.	<b>Sonali Sethi</b> , N. Kailey, V. Sharma Madhu (School of Mathematics, Thapar University, Patiala, India) Nonsymmetric mixed-higher order multiobjective dual programs with support functions involving cone constraints
3.	<b>Ekta Jain</b> (Department of Mathematics, Panjab University, Chandigarh, India), Kalpana Dahiya, Vanita Verma, Integer Quadratic Fractional Programming Problems with Bounded Variables
4.	<b>Khushboo</b> (Department of Mathematics, University of Delhi, Delhi, India), C.S. Lalitha Scalarizations for a unified vector optimization problem based on the order representing and the order preserving properties
5.	<b>Mohd. Rizwanullah</b> (Manipal University, Jaipur, India), K.K. Kaanodiya, Distribution System using Recourse Model
6.	<b>Bhawna Kohli</b> (Department of Mathematics, University of Delhi, Delhi, India) Sufficient Optimality Conditions for Optimistic Bilevel Programming Problem Using Convexifactors

**January 11, 2017 Time: 10:00 -11:20 Venue: Auditorium**

**Invited Session VI**

**Chairman:** Yasunori Kimura, Toho University, Funabashi, Japan

1.	<b>Agnieszka Wiszniewska-Matyszek</b> (Institute of Applied Mathematics and Mechanics, University of Warsaw, Poland) (jointly with Rajani Singh) Linear quadratic game of exploitation of common renewable resources with inherent constraints
2.	<b>B. K. Mohanty</b> (Indian Institute of Management Lucknow, India) Use of Fuzzy MCDM in Product Ranking

**Tea Break: 11:20 -11:40**

**January 11, 2017 Time: 11.40 -12.20 Venue: Auditorium**

**Invited Session VII**

**Chairman:** Tadashi SAKUMA, Yamagata University, Japan

1.	<b>K.C. Sivakumar</b> (Department of Mathematics, Indian Institute of Technology Madras Chennai , India.) Complementarity Properties of Singular M-matrices
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**January 11, 2017 Time: 12.20 -13:00 Venue: Auditorium**

**Technical Session III**

**Chairman:** S. Dharmaraja, Indian Institute of Technology Delhi, India

1.	<b>Aditya Aradhye</b> (Chennai Mathematical Institute (CMI), Chennai, India), Nagarajan Krishnamurthy, Pramod Mane, Kapil Ahuja, Stable Social Clouds
2.	<b>Shilpi Verma</b> (Department of Mathematics, Shivaji College, New Delhi, India), Mukesh Kumar Mehlawat, An Integrated analytical hierarchy process approach for COTS component selection

**Lunch Break: 13:00 -14:00**

**January 11, 2017 Time: 14:00 -15.20 Venue: Auditorium**

**Invited Session VIII**

**Chairman:** T. Parthasarathy, Chennai Mathematical Institute, Chennai, India

1.	<b>C. S. Lalitha</b> (Department of Mathematics, University of Delhi, Delhi, India) Stability of Solutions of Set Optimization Problems
2.	<b>Pankaj Gupta</b> (Department of Operational Research, Faculty of Mathematical Sciences, University of Delhi, Delhi, India) Possibilistic Optimization

**Tea Break: 15:20 -15:45**

**January 11, 2017 Time: 15:45 -17:30 Venue: Auditorium**

**Technical Session IV**

**Chairman:** Pankaj Gupta, Department of Operational Research, University of Delhi, India

1.	<b>Mahima Gupta</b> (IMT Ghaziabad, India) A Multistage Multiobjective Production Planning Problem-A Goal Programming Approach
2.	<b>Khushboo Verma</b> (Department of Mathematics and Astronomy, University of Lucknow, Lucknow, India), Pankaj Mathur, T. R. Gulati, Higher order symmetric duality in multiobjective programming over cone-invex function
3.	<b>Kunwar V. K. Singh</b> (Department of Mathematics, Institute of Science, Banaras Hindu University Varanasi, India), S. K. Mishra, Duality for multiobjective mathematical programming problems with equilibrium constraints
4.	<b>Vinod Kumar Mishra</b> (Department of Computer Science and Engineering, Bipin Tripathi Kumaon Institute of Technology, Dwarahat, Almora, Uttarakhand, India) Inventory model for substitutable deteriorating items with stock out based substitution under joint replenishment
5.	<b>Shalabh Singh</b> (IIM Lucknow), Sonia, Multistage Stochastic Decision Making in Dynamic Multi-level Bi-criteria multi-choice assignment problem
6.	<b>Vinod Kumar Chauhan</b> (Computer Science & Applications Panjab University Chandigarh, INDIA), Kalpana Dahiya, Anuj Sharma, Trust Region Levenberg-Marquardt Method for Support Vector Machines