International Symposium on Operations Research and Game Theory: Modeling and Computation

Program Overview

Inaugural Session Details

January 9, 2018        Time:  10:00 -10:30    Venue : Auditorium

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

Tea Break:  10:30 -10:45

Sessions Details

January 9, 2018        Time:  10:45 -13:00    Venue : Auditorium

Invited Session I
Chairman : S. K. Neogy, Indian Statistical Institute, Delhi Centre

1. Katta G. Murty (University of Michigan, Ann Arbor, USA) (jointly with David L. Kaufman and Peter Benson)  
   Sphere Method 7-3 Using No Matrix Inversions for Linear Programs (LPs)

2. Zdenek Dostal (VSB-Technical University Ostrava, Czech Republic)  
   Fast algorithms for QP and QCQP problems with applications

3. Cidambi Srinivasan (jointly with Richard Charnigo ) University of Kentucky, USA,  
   Inference for a Nonparametric Model without Nonparametric Estimation

Lunch Break:  13:00 -14:00

January 9, 2018    Time:  14:00 -15:20    Venue: Auditorium

Invited Session II
Chairman: Bo Chen, University of Warwick, UK

1. Pierre Flener (Uppsala University, Sweden)  
   Constraint Based Modelling and Solving of Combinatorial Problems

2. Sandeep Juneja (Tata Institute of Fundamental Research, Mumbai, India)  
   Perfect Sampling for Gibbs Processes with a focus on Hard-sphere Models

Tea Break:  15:20 -15:45
January 9, 2018  Time: 15.45 -18:00  Venue: Auditorium
Technical Session-I A
Chairman : Juan Enrique Martínez-Legaz, Universitat Autònoma de Barcelona, Spain

1. Monica Patriche (University of Bucharest) *Existence of the equilibrium in choice*
2. Sujatha Babu (Indian Institute of Technology Madras), Usha Mohan, Tiru Arthanari, *Modeling coopetition as a Quantum game*
3. Anjali Singh and Anjana Gupta (Delhi Technological University, India), *Optimization based consensus model to solve multi criteria large group decision making problems*
4. Sagnik Sinha (Jadavpur University, Kolkata), Kushal Guha Neogy, Prasenjit Mondal, *On Zero-Sum Two-Person Perfect Information Semi-Markov Games*
5. Prasenjit Mondal (Government General Degree College at Ranibandh, Bankura) *On Single Controller Semi-Markov Games Under Limiting Ratio Average Payoff*
6. Akash Singh and Uttam Kumar Bera (National Institute of Technology Agartala) *A Mathematical Model for a Multi-Objective Solid Transportation Problem in Hilly Areas*
7. Bijoy Krishna Debnath (National Institute of Technology Agartala), Pinki Majumder, Uttam Kumar Bera, *A fuzzy economic order quantity (FEOQ) inventory model: A fuzzy differential equation approach*

---

January 9, 2018  Time: 15.45 -18:00  Venue: Conference Room
Technical Session-I B
Chairman : T. Parthasarathy, Chennai Mathematical Institute, Chennai, India

1. P. Aparna (MBA Dept, Sir CRReddy PG Courses, Eluru) *Extended abstract for Travelling Salesman problem in Business Analytics*
2. Akanksha Singh (Thapar University, Patiala, Punjab) *Modified non-linear programming method for multi-criteria decision making problems under interval neutrosophic set environment*
3. Tina Verma (Indian Institute of Technology, Ropar), Arvind Kumar Gupta, *A bi-objective programming approach for solving imprecise matrix games by considering Payoff as intervals*
4. Shahid Ahmad Bhat (Thapar University, Patiala, Panjab) *A fuzzy AHP approach to construct international hotel spa atmosphere evaluation model: Suggested modification*
5. Mamta Agrawal (VIT Bhopal University) *Computational Model to Study Temperature Distribution In Deep Tissue Of Human Limb Containing Liposarcoma Tumor*
7. Arshdeep Kaur (Thapar University, Patiala, Punjab) *The Inclusion-Based LINMAP Method for Multiple Criteria Decision Analysis Within an Interval-Valued Atanassov’s Intuitionistic Fuzzy Environment: Suggested Modification*

---

January 9, 2018  Time: 18:30-20:00  Cultural Programme followed by Dinner
Venue: Auditorium, Dinner: Guest House Lawn

January 10, 2018  Time:  10:00 -11:20  Venue: Auditorium

Invited Session III

Chairman: Katta G. Murty, University of Michigan, Ann Arbor, USA

| 1. Juan Enrique Martínez-Legaz (Universitat Autònoma de Barcelona, Spain), Extensions of the Frank-and-Wolfe Theorem |
| 2. Masahiro Hachimori (University of Tsukuba, Japan), Partitioning simplicial complexes and their $h$-triangles |

Tea Break:  11:20 -11:40

January 10, 2018  Time:  11:40 -13:00  Venue: Auditorium

Invited Session IV

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

| 1. Andrey Garnaev (Saint Petersburg State University, Russia) Revising a search game: Rival might not be rational |
| 2. Bo Chen (University of Warwick, UK), Analysis of a Procurement Game with Option Contracts |

Lunch Break:  13:00 -14:00

Invited Session V

January 10, 2018  Time:  14:00 -16:00  Venue: Auditorium

Chairman: Andrey Garnaev, Saint Petersburg State University, Russia

| 1. Satoru Takahashi (National University of Singapore) Blackwell Equilibria |
| 2. J. Jude Kline (University of Queensland, Brisbane, Australia) (jointly with Thierry Lavendhomme and Samuel Waltener) From Memories to Inductively Derived Views: A Constructive Approach |
| 3. Anna Khmelnitskaya (Saint-Petersburg State University, Russia) (jointly with Gerard van der Laan and Dolf Talman) Centrality rewarding Shapley and Myerson values for undirected graph games |

Tea Break:  16:00 -16:15
January 10, 2018    Time: 16:15 -18:15    Venue: Auditorium
Technical Session-II A
Chairman : Pierre Flener, Uppsala University, Sweden

1. Amita Sharma, (Indian Institute of Information Technology Guwahati), Anubha Goel, Aparna Mehra, Deviation Measure in Second Order Stochastic Dominance with an Application to Enhanced Indexing

2. D. Aussel, J. Dutta and T. Pandit (IIT Kanpur, India), About the links between equilibrium problems and variational inequalities

3. Hamidur Rahman (Indian Institute of Technology Bombay, Mumbai, India) and Ashutosh Mahajan, Facets of a Mixed-Integer Bilinear Covering Set with Bounds on Variables

4. Manish Sarkhel, and Nagarajan Krishnamurthy (Indian Institute of Management (IIM) Indore, India, Stability in core-periphery production networks

5. Umakanta Pattanayak (Indian Institute of Technology Bombay, Mumbai, India), Vishnu Narayanan, Geometry of Integer hulls of Strictly Convex Sets

6. Tejas Ghorpade and Narayan Rangaraj (Indian Institute of Technology Bombay, India) Two-step Algorithm for Pickup-Delivery Problem


---

January 10, 2018     Time: 16.15 -18:15   Venue: Conference Room

Technical Session-II B

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

1. Karuna (University of Delhi, India) C.S. Lalitha, Approximate weak efficient solutions and continuity in parametric set Optimization

2. KC Lalropuia (University of Delhi), Vandana Gupta, Dependability analysis of internet of things (IoT) under attack based on game theory and semi-Markov process.

3. Akansha Mishra (Thapar University, Patiala Punjab, India), Some Picture Fuzzy Aggregation Operators and Their Applications to Multicriteria Decision-Making: Suggested Modifications

4. Chayanika Rout, Debjani Chakraborty and Adrijit Goswami (Indian Institute of Technology, Kharagpur - 721302, India) An EPQ Model for Deteriorating Items with Imperfect Production, Two Types of Inspection Errors and Rework

5. Anju Saini (VIT Bhopal University, Bhopal, India), V.K. Katiyar and Sarita, Mathematical Simulation of Incompressible Newtonian Blood Flow with a Multiple Stenosed Artery

6. Sarita Singh (Doon University Dehradun, India), V.K. Katiyar, Pulsatility Effect of Oxygen Transport In Human Lung Bifurcation: A Numerical study

7. Sonali Sethi (School of Mathematics, Thapar University, Patiala, India) Duality for a class of non-differentiable minimax fractional programming problems with generalized invexity
Invited Session VI
Chairman: Yasunori Kimura, Toho University, Funabashi, Japan

1. T.E.S. Raghavan (University of Illinois at Chicago) On completely mixed equilibria and equilibrium payoffs in game forms and in normal form games
2. T. Parthasarathy (Chennai Mathematical Institute, Chennai, India) Univalence Principle in the sense of Gale and Nikaido

Tea Break: 11:20 -11:40

Invited Session VII
Chairman: T. Parthasarathy (Chennai Mathematical Institute, Chennai, India)

1. J. Dutta (Indian Institute of Technology Kanpur, India) Detecting the Convexity of a Function and related Issues
2. Yasunori Kimura (Toho University, Japan), Iterative methods for finding a fixed point of a mapping on geodetic spaces

Lunch Break: 13:00 -14:00

Invited Session VIII
Chairman: Anna Khmelnitskaya (Saint-Petersburg State University, Russia)

1. S Dharmaraja (Indian Institute of Technology Delhi) Optimal trading problem under stochastic dominance constraints and autoregressive price dynamics
2. C.S. Lalitha (University of Delhi, India) Pointwise and global well-posedness in set optimization: A direct approach
3. Pankaj Gupta (University of Delhi, India) Multi-attribute Decision Making

Tea Break: 16:00 -16:15
Technical Session-III A
Chairman: Joydeep Dutta, Indian Institute of Technology, Kanpur, India

Technical Session-III A
Chairman: Joydeep Dutta, Indian Institute of Technology, Kanpur, India

<table>
<thead>
<tr>
<th></th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Painlevé-Kuratowski convergence of solution sets in unified vector optimization</td>
<td>Shiva Kapoor (University of Delhi), C. S. Lalitha</td>
</tr>
<tr>
<td>2</td>
<td>Pricing decisions for three-tier supply chain under fuzzy environment: A game-theoretic approach</td>
<td>Rohit Gupta (IIM, Lucknow), Indranil Biswas, Sushil Kumar</td>
</tr>
<tr>
<td>3</td>
<td>Robust Gini Mean Difference Portfolio Optimization</td>
<td>Ruchika Sehgal (Indian Institute of Technology Delhi) and Aparna Mehra (Indian Institute of Technology Delhi)</td>
</tr>
<tr>
<td>4</td>
<td>A Bilevel Programming Model for a Cohesive Decision Making on Strategic Pricing and Production Distribution Planning for a Small Scale Supplier</td>
<td>Akhilesh Kumar (Delhi Technological University), Anjana Gupta, Aparna Mehra</td>
</tr>
<tr>
<td>5</td>
<td>Well-Posedness and Scalarization in set Optimization</td>
<td>Meenakshi Gupta (University of Delhi), Manjari Srivastava</td>
</tr>
<tr>
<td>6</td>
<td>Witold Pedrycz method under interval-valued intuitionistic fuzzy environment</td>
<td>Pankaj Gupta, Mukesh Kumar Mehlawat, Nishtha Grover (University of Delhi)</td>
</tr>
<tr>
<td>7</td>
<td>Fuzzy Regression Models Using the Least-Squares Method Based on the Concept of Distance: Suggested modifications</td>
<td>Abdullah Al-Qudaimi (Thapar University, Patiala, Punjab)</td>
</tr>
</tbody>
</table>

January 11, 2018 Time: 16:15 - 18:15 Venue: Conference Room
Technical Session-III B
Chairman: Anna Khmelnitskaya, Saint-Petersburg State University, Russia

<table>
<thead>
<tr>
<th></th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Optimality conditions for optimization problems with nonconvex feasible set</td>
<td>Priyanka Yadav (University of Delhi), C. S. Lalitha</td>
</tr>
<tr>
<td>2</td>
<td>Henig subdifferential for a set-valued optimization problem</td>
<td>Mansi Dhingra (University of Delhi), C. S. Lalitha</td>
</tr>
<tr>
<td>3</td>
<td>On Sufficiency and Duality for multiobjective programming problems using convexificators</td>
<td>Vivek Laha, Pushkar Jaisawal (Banaras Hindu University)</td>
</tr>
<tr>
<td>4</td>
<td>Optimizing the Last-Mile in Ecommerce Logistics using Sub-contracting Options and Historic GPS Location Data</td>
<td>Anurag Paul, Kabir Rustogi (Delhivery, Plot 5, Sector 44, Gurgaon)</td>
</tr>
<tr>
<td>5</td>
<td>Pricing decisions for three-tier supply chain under fuzzy environment: A game-theoretic approach</td>
<td>Rohit Gupta (Indian Institute of Management Lucknow), Indranil Biswas, Sushil Kumar</td>
</tr>
<tr>
<td>6</td>
<td>Necessary and sufficient optimality conditions using convexifactors for mathematical programs with equilibrium constraints</td>
<td>Bhawna Kohli (Department of Mathematics, University of Delhi, Delhi, India)</td>
</tr>
</tbody>
</table>