# International Conference on
# Operations Research and Decision Science
# (ICORDS 2025)
## In honor of Professor TES Raghavan on his 85th Birthday

## June 05-07, 2025
### Center for Advanced Research in Applied Mathematics and Statistics
### MAHE, Manipal, India

**Venue: KEF R&D Center, MIT Manipal**

# DAY 1
**June 05, 2025**

| | |
|---|---|
| 09:00 – 09:30 | Registration |

**Venue: Auditorium**

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|---|---|
| 09:30 – 09:40 | Welcome & Overview |
| | K. Manjunatha Prasad, Convener, SAC, ICORDS 2025 |
| | Samir Kumar Neogy, Chairman, SAC, ICORDS 2025 |

**09:40 – 10:30**    **Technical session 1 - Invited talks**
**Venue : Auditorium**
Chairperson:  S K Neogy, Indian Statistical Institute Delhi Centre

09:40 – 10:25  Juan Enrique Martinez-Legaz, Uni. Aut. de Barcelona, Spain
Duality for Quasiconvex Scalar and Vector minimization over Closed Convex Cones

**10:30 – 10:45**    **TEA BREAK**

**10:50 – 12:30**    **Technical session 2 - Invited talks**
**Venue : Auditorium**
Chairperson:  Agnieszka Wiszniewska-Matyszkiel, Uni. Warsaw, Poland

10:50 – 11:20    N. Hemachandra, IIT Bombay, India
Solutions from efficient sets of multi-objective problems and efficient policies of some MDPs

11:25 – 11:55    Rajeev R Tripathi, IIM Bangalore, India
Platform-enabled farmer cooperation for sustainable agriculture: Coalition formation and pricing decisions

12:00 – 12:30    Thirumalanathan D, IIT Kanpur, India
Design of revenue-optimal auctions in two-item setting

**12:35 – 13:15**       **Technical session 3 - Invited talks**
**Venue : Auditorium**
Chairperson:  R.A.M.G. Joosten, University of Twente, Netherlands

    12:35 – 13:15       Dietrich von Rosen, Swedish University of Agricultural
Sciences, Sweden
Classification of growth curves when unknown populations exist


**13:15 -14:15**       **LUNCH BREAK**

**14:15 – 15:00**       **INAUGURATION SESSION**

**15:00 – 15:15**       **PHOTO and TEA BREAK**


**15:15 – 16:30**       **Technical session 4 - Invited talks**
**Venue : Auditorium**
Chairperson:  Murali K Srinivasan, IIT Bombay, India

    15:15 – 15:45       Sasmita Barik, IIT Bhubaneshwar, India
The limit points of the smallest positive eigenvalues of graphs

    16:45 – 16:15       Dipti Dubey, Shiv Nadar Institute of Eminence, India
On Almost Semimonotone Matrices

    16:15 – 16:45       K. C. Sivakumar, Indian Institute of Technology Madras, India
The maximum determinant positive definite completion problem


**16:45 – 17:25**       **Technical session 5 - Invited talks**
**Venue : Auditorium**
Chairperson:  Sasmita Barik, IIT Bhubaneshwar, India

    16:40 – 17:20       TES Raghavan, University of Illinois at Chicago, USA
My life journey : School, College and ISI days, Game theory at UIC


**17:25 – 18:30**       **Technical sessions 6 - Contributory Talks**

**Technical sessions 6A (Contributory Talks - 06)**
**Venue: Tutorial Hall 01**
Chairperson:  David Raj Micheal, Vellore Institute of Technology, Chennai, India

Manish Aggarwal, Indian Institute of Technology Jodhpur, India
    Ranking Obstacles in Adopting Renewable Energy through a Data-Driven
    Approach
Ashwath Bajaj, Indian Institute of Information Technology Raichur, India

Algorithm to Improve Passenger Satisfaction Index in Railway Seat
Allocation with Optimal Revenue
Vanshika Datta, Indian Institute of Technology Kharagpur, India
Radius of robust feasibility and application in directional sensor networks
Bharat Kumar, Indian Institute Technology Kanpur, India
Optimal Mechanism Design
Pramod Mane, National Institute of Bank Management Pune, India
Game Theory in Banking: Current Trends and Future Scope
Mohit Ray, Indian Institute of Management Kashipur, India
Supporting Farmers Versus Processors for Sustainable Crop Residue
Utilization

**Technical sessions 6B (Contributory Talks - 04)**
**Venue: KEF Auditorium Hall**
Chairperson: Vinay Madhusudhanan, MIT, MAHE, Manipal India

Anand  Ellur, SDM Institute for Management Development, Mysuru, India
Exploring Future Research on the Use of Technology in Project Management:
A Morphological Analysis
Mridusmita Hazarika, National Institute of Technology Nagaland, India
Feedback Stackelberg Differential Game to Determine  Optimum Production
and Selling Price in a  Three-Echelon Supply Chain
Neha Punetha, Delhi Technological University, Delhi, India
Analyzing Sentiment Dynamics with the Hawk-Dove Model for Hinglish
Language Text via A Mathematical Optimization Approach
Caroline Vincy, Vellore Institute of Technology, Vellore, India
Embedding the structure $\left(K_p - C_p\right)^n$ into some family of graphs and
computing its optimal wirelength

**19:30**                                    **CONFERENCE DINNER**

# DAY 2
## June 06, 2025

**09:15 – 11:00**       **Technical session 7 - Invited talks**
**Venue: KEF Auditorium Hall**
Chairperson:  Vasudeva Guddattu, DASDS, PSPH, MAHE, Manipal, India

09:15 – 09:45       R.A.M.G. Joosten, University of Twente, Netherlands
The 'oracle' under computational time constraints: The inductive nucleolus for cooperative games

09:50 – 10:20       Agnieszka Wiszniewska-Matyszkiel, Uni. Warsaw, Poland
How to avoid the tragedy of the commons in the imperfect world

10:25 – 10:55       Murali K Srinivasan, IIT Bombay, India
A problem on edge-colored graphs

**11:00 – 11:15**       **TEA BREAK**

**11:15 – 13:00**       **Technical session 8 - Invited talks**
**Venue: KEF Auditorium Hall**
Chairperson:  N. Hemachandra, IIT Bombay, India

11:15 – 11:45       Gajendra Pratap Singh, Jawaharlal Nehru University, Delhi
Optimizing Complex Decisions Through Petri Net Modelling and Simulation Techniques

11:50 – 12:20       Manisha Padala, IIT Gandhinagar, India
Provisioning Public Projects to Maximize Social Welfare

12:25 – 12:55       Palanivel K, VIT Vellore, India
Optimizing Bi-objective Sustainable Transportation Model under Neutrosophic Applications

**13:00-14:00**       **LUNCH BREAK**

**14:00-15:40**       **Technical session 9 - Invited talks**
**Venue: KEF Auditorium Hall**
Chairperson:  Juan Enrique Martinez-Legaz, Uni. Aut. de Barcelona, Spain

14:00 – 14:30       S K Neogy, Indian Statistical Institute, Delhi Centre, India
A walk on Max-Plus Algebra to Optimization and Game theory

14:35 – 15:05       Nagarajan Krishnamurthy, IIM Indore, India
Stochastic Games: Orderfield Property and Algorithms

15:10 – 15:50      TES Raghavan, University of Illinois at Chicago, USA
My life journey : Shapley value, Multichoice Shapley value, Assignment games and the nucleolus, Correlated equilibria, , ARAT stochastic games and algorithms, Patience theorem, Final offer arbitration, Measuring the power of dominant member among married couples.


**15:55-16:15**                                        **TEA BREAK**


**16:15-18:00**                        **Technical sessions 10 - Contributory Talks**
(3 Parallel Sessions, 16 contributory talks)

### Technical sessions 10A (Contributory Talks )
### Venue: KEF Auditorium Hall
Chairperson: Kedukodi Babushri Srinivas, MIT, MAHE, Manipal, India

Anoop A K, Indian Institute of Management Kozhikode, India
Optimizing Volunteer Assignment in Disaster Response: Priority-Aware and Fairness-Driven Mathematical Models
Divyansh Agarwal, Indian Institute of Technology Kanpur, India
Optimal Auction Design
Agnivo Basu, Prasanna School of Public Health, MAHE, Manipal, India
A Complex-Systems, Multi-Criteria Decision-Science Engine for Personal Health Optimisation
Mahima Kumar, Netaji Subhas University of Technology, New Delhi, India
Performance Analysis of Beamforming-Enabled DRX in 5G NR-Ufor Standalone and Non-Standalone modes
Ranu Singh, Indian Institute of Technology Bhubaneswar, India
Modeling and Analysis of $M/G/1$ Queueing-Inventory System with Random Order and Batch Demand


### Technical sessions 10B (Contributory Talks )
### Venue: Tutorial Hall 01
Chairperson: Thirumulanathan D, IIT Kanpur, India

Arnab Bhabak, Indian Institute of Technology Bombay, India
Partially Observable Discrete-time Discounted Markov Games with General Utility
Ramendra Singh Chauhan, Indian Institute of Technology Guwahati, India
Strategic customer behavior in partially observable M/M/1 queue with working vacation and delayed
S Gokulraj, National Institute of Technology Calicut, India
On zero-sum games with linearly coupled constraints
Ekata Jain, Sardar Vallabhbhai National Institute of Technology, Surat, India
Fuzzy Multi-objective Multi-item Five-Dimensional Transportation Problem and Its Solutions by Variants of Genetic Algorithm
Ishu Jain, Netaji Subhas University of Technology, New Delhi, India
Reliability Analysis of Multiple High Altitude Platform Station by Using Semi-Markov Model

Kavitha Mahesh, Prasanna School of Public Health, MAHE, Manipal, India
    Uncovering Hateful Content in Memes: A Case Study in Low Data Setting


**Technical sessions 10C (Best Paper Award – 05 Talks )**
**Venue: Tutorial Hall 02**
Coordinator: Harikrishnan P K, MIT, MAHE, Manipal, India

Rahul Chavhan, Indian Institute of Technology Bombay, India
    Reinforcement Learning-Based Real-Time Inventory Management for Quick
    Commerce Supply Chains
Prashant Khileri, Christ (Deemed to be University), Delhi NCR, India
    Inventory Model with Investment in Carbon Emission  Reduction for Growing
    Items
Aradhana Narang, BML Munjal University, Gurugram, India
    Stability of faces in asymmetric evolutionary games
Akhil Vijayan R, Central University of Kerala, India
    Assessing the Impact of Replenishment Policies and Repair Mechanisms on
    Energy Management System Reliability
PL Meena, School of Business, College of Charleston, United States of America
    Subsidizing Sustainability: ESG Investment under Government Subsidies in
    Supply Chains

# DAY 3
## June 07, 2025

**09:00 – 11:00**          **Technical session 11 – Dedicated to TES Raghavan**
                          **Venue: KEF Auditorium Hall**
                   Chairperson:  TES Raghavan, Uni. Illinois at Chicago, USA

                   09:00 – 09:05  About TES Raghavan: K M Prasad

                   09:05 – 09:40  TES Raghavan, Uni. Illinois at Chicago, USA
                   International collaborations, conferences, and Gurukulams in Game theory

                   09:40 – 09:45  Best wishes from R B Bapat – A Voice Message

                   09:45 – 10:20  Jerzy A Filar, University of Queensland, Australia
                   T.E.S. Raghavan: Reminiscences & Hidden Equations of Threshold Risk

                   10:25 – 10:55  Tiru Arthanari, University of Auckland, Auckland,
                                                                    New Zealand
                   Complexity of Combinatorial Optimization Problems- Do we have a
                   breakthrough?

                   10:55 – 10:55  Best wishes from well-wishers


**11:00 – 11:15**                          **TEA BREAK**

**11:15 – 13:00**          **Technical sessions 12 - Contributory Talks**
                          (3 Parallel Sessions, 18 contributory talks)

          **Technical sessions 12A (Contributory Talks )**
                          **Venue: KEF Auditorium**
                   Chairperson: Arathi Bhat, MIT, MAHE, Manipal, India

Anirban Mitra, Indian Institute of Technology Roorkee, India
          Impatience as a Market Force: Strategic Interactions in Modern Service
          Economies
Divya Murali, Indian Institute of Technology Bombay, India
          Discounted Stochastic Games and Evolutionary Dynamics
Aradhana Narang, BML Munjal University, Gurugram, India
          Superiority of profiles in n-population asymmetric evolutionary games with
          strategy spaces of continuous type
Joshi Nikunj, Sardar Vallabhbhai National Institute of Technology, Surat, India
          Intelligent Deep Forecasting and Multi-Objective Evolutionary Optimization
          for Robust Index Option Strategies
Shuvabrata Chakraborty, Indian Institute of Management Raipur, India
          E-commerce Middle-mile Network Design with Delivery Speed Choices and
          Service Level Constraints
David Raj Micheal, Vellore Institute of Technology, Chennai, India

Generalized Inverses in the Optimization Problems


**Technical sessions 12B (Contributory Talks )**
**Venue: Tutorial Hall 1**
Chairperson: Shreemathi Mayya, DASDS, PSPH, MAHE, Manipal, India

Salini K, Central University of Kerala, Kasaragod, India
   Strategic Behavior of Bounded Rational Customers in a Queueing-Inventory
   System with Quality Feedback
Dinesh Kumar, Indian Institute of Technology Kharagpur, India
   A Subgradient-based Descent Scheme for Constrained Nonsmooth
   Multiobjective Optimization Problems
Manikandan Rangaswamy, Central University of Kerala, Kasaragod, India
   An Analytical and Computational Analysis of \textit{Con/k/n:F} Systems with
   Repair and Replenishment
Bhagyajyothi Rao, Manipal Academy of Higher Education, Manipal, India
   Spatial Machine Learning and Explainable AI to Identify Key Drivers of
   Childhood Stunting in India using Multidimensional Indicators
Soumya Roy, Indian Institute of Management Kozhikode, India
   Reliability Sampling Plans under Progressive Type-I Interval Censoring with
   Competing Risks
Gannamaneni Sai Charan, Sardar Vallabhbhai National Institute of Technology,
                                                          Surat, India
   Fuzzy analysis of non-preemptive priority retrial queue system with delayed
   vacations, server breakdown, and balking


**Technical sessions 12C (Contributory Talks )**
**Venue: Tutorial Hall 1**
Chairperson:   Satyanarayana Poojari, PSPH, MAHE, Manipal, India

Santo Sali, Central University of Kerala, India
   Strategic Behavior in a Markovian Queue with Working Vacation, N-policy
   and Delayed Observations
Aditya Sharma, Indian Institute of Technology Indore, India
   A Derivative-Free Spectral Conjugate Gradient Method for Large-Scale
   Pseudomonotone Systems of Nonlinear Equations with Applications in
   Machine Learning
Amita Sharma, Netaji Subhas University of Technology Delhi, India
   Data-Driven Robust Portfolio Optimization
Kamayani Shukla, Netaji Subhas University of Technology, New Delhi, India
   A Robust Optimization Approach to Enhanced Indexing Under Interval
   Uncertainty
Kishan Suthar, Indian Institute of Management, Indore, India,
   The Existence and Uniqueness of Equilibrium in Stochastic Generalized Nash
   Games


13:00 – 14:00                               **LUNCH BREAK**

**14:00-15:50**                    **Technical session 13 - Invited talks**
                               **Venue: KEF Auditorium Hall**
            Chairperson: Kuncham Syam Prasad, MIT, MAHE, Manipal, India

       14:00 – 14:30   Sivaramakrishnan Sivasubramanian, Indian Institute of
                                                Technology Bombay, India
       The 2-Steiner distance and two other matrices associated to a tree

       15:20 – 15:50   Dominic Slezak, University of Warsaw, Poland
       To be announced


**15:50-16:20**                              **Valedictory**


**16:20 – 16:45**                            **HIGH TEA**