



האגודה הישראלית לחקר בצועים
OPERATIONS RESEARCH SOCIETY OF ISRAEL **אינר**

ORSIS 2011: Conference Program

Sunday, May 29

8:00–9:15 **Registration**

9:15–9:25 **Greetings**

9:25–10:40 **Parallel Sessions S1**

(S1A) **Optimization in Machine Learning and Data Mining [Abirim 1]**

Chair: Elad Hazan

- What else can we do with more data?
Shai Shalev Schwartz
- Clustering and Approximating High-Dimensional Streaming Data using Coresets
Danny Feldman
- Improving Learning by Tracking Uncertainty
Koby Crammer

(S1B) **The Yale-Technion Daniel Rose Center for Homeland Security [Abirim 2]**

Chair: Boaz Golany and Uriel Rothblum

- Separation and Protection Efficiency in Defense Strategy Against Terrorism
Gregory Levitin, Kjell Hausken
- Bi-Linear Inspection Game - Single Inspector vs. Single Manager Who Controls Multiple Inspectees
Yael Deutsch, Boaz Golany, Uriel Rothblum
- Civil Defense: A Military-Strategic Perspective
Itzhak Ravid

(S1C) **The Analysis and Optimization of Stochastic Systems [main]**

Chair: Rami Atar and Haya Kaspı

- The Offered Load in Fork-Join Networks: Calculations and Applications to Service Engineering of Emergency Department
Itamar Zeid
- Risk Sensitive Portfolio Optimization in a Semi-Markov Modulated Market
Anindya Goswami
- On many-server limits of the parallel server model
Rami Atar, Haya Kaspı, Nahum Shimkin

10:40–11:00 **Break**

11:00–11:50 **Naor Lecture (invited by the Technion)**

- On Geometric Clustering and its Applications
Peter Gritzmann

11:50–12:25 **Lifetime Achievement Award:** Reuven Rubinstein

12:25–13:40 **Lunch**

13:40–13:50 **ORSIS and Abraham Mehrez Award Ceremony**

13:50–14:15 **ORSIS Award (talk)**

- Nash Bargaining Over Allocations in Inventory Pooling Contracts
Yigal Gerchak and Eran Hanany

14:15–15:30 **Parallel Sessions S2**

(S2A) **Production Systems [main]**

Chair: Gad Rabinowitz

- The Relationship between Yield and Flow Time in a Production System under Inspection
Israel Tirkel, Gad Rabinowitz
- Equipment Maintenance and Inspection Policies impact on Flow Time and Yield
Arava Ben Horin, Israel Tirkel, Gad Rabinowitz
- Cycle Time and Yield of a Multi-feeding Production Cell Under in-line Inspection
Elad Gati, Israel Tirkel, Gad Rabinowitz

(S2B) **Algebraic and Geometric Methods for Discrete Optimization [Abirim 1]**

Chair: Shmuel Onn

- Multiple via Single Criteria Optimization and Projections of Integer Hulls
Michal Rozenblit
- Hilbert's Nullstellensatz and Linear Algebra: An Algorithm for Determining Combinatorial Infeasibility
Susan Margulies
- N-Fold Integer Programming in Cubic Time (Abraham Mehrez Award)
Raymond Hemmecke, Shmuel Onn, Lyubov Romanchuk

(S2C) **Stochastic Models [Abirim 2]**

Chair: Iddo Eliazar

- Universal control of search swarms
Iddo Eliazar, Joseph Klafter
- An insensitivity of reflection mappings on an orthant
Offer Kella, S. Ramasubramanian
- Tandem Queues with Batch Service
Iddo Eliazar, Shlomi Reuveni, Uri Yechiali

15:30–15:50 **Break**

15:50–17:30 **Parallel Sessions S3**

(S3A) **Topics in Operations Research 1 [Abirim 1]**

Chair: Joseph Kreimer

- Stochastic Enumeration Method for Counting
Reuven Rubinstein, Radislav Vaisman

- Location Reliability Models: New Directions and Insights
Oded Berman, Dmitry Krass
- Optimization of Real-Time Systems (Simulation and Analytic Approach)
Joseph Kreimer, Edward Ianovsky
- The Value of Accurate Inventory Information in Supply Chain Management
Avrahami Assaf, Avinoam Tzimerman, Yale T. Herer, Avraham Shtub

(S3B) **Game Theory [Abirim 2]**

Chair: Shoshana Anily

- A Stochastic Competitive R&D Race where "Winner Takes All": Explicit Computation of a Unique Nash Equilibrium
Boaz Golany, Pelin Gulsah Canbolat, Inbal Mund, Uriel G. Rothblum
- Explicit Pricing Strategies in Competitive Market with Reference Effect
Eyal Dayan, Arieh Gavius, Oded Lowengart
- Sequential All-Pay Auctions with Head Starts
Ella Segev, Aner Sela
- On the balancedness of homogeneous of degree one games with applications to queues with outsourcing
Shoshana Anily, Moshe Haviv

(S3C) **Transportation [Abirim 3]**

Chair: Tal Raviv

- The Locomotive Fleet Fueling Problem
Tal Raviv, Mor Kaspi
- Evaluating the efficiency of local municipalities' traffic safety programs via Data Envelopment Analysis
Doron Alper, Zilla Sinuany-Stern, David Shinar
- Benchmarking airports from a managerial perspective
Nicole Adler, Vanessa Liebert, Ekaterina Yazhensky
- New Industry Formation for Sustainable Transportation
Michael Naor, Cheryl Druehl, Ednilson Bernardes, Yoram Shiftan, Shalom Hakkert

17:30–22:00 **Tour and Dinner**

Monday, May 30

8:00–9:15 **Registration**

9:15–10:30 **Parallel Sessions M1**

(M1A) **Military OR [Abirim 1]**

Chair: Liron Yedidsion

- Mathematical Models of Insurgencies
Moshe Kress
- Multi-Criteria/Multi-Domain Optimization and Target Cascading for System Level Design
David V. Strimling
- Traveling Salesman Problem in Dynamic Environment
Eran Simhon, Liron Yedidsion, Shraga Shoval

(M1B) **Stochastic Queueing/Inventory Systems [Main]**

Chair: David Perry

- State Dependent Priorities for Service Systems with Exchangeable Items
O.J. Boxma, David Perry, Rachel Ravid
- A Fluid EOQ Model of Perishable Items with Intermittent High and Low Demand Rates
Onno Boxma, David Perry, Shelley Zacks
- Accounting for Exact Temporal Behavior of Costs in Stochastic Inventory Systems
Tal Avinadav, Mordecai I. Henig

(M1C) **Discrete Optimization [Abirim 2]**

Chair: Maria Polukarov

- Graph Coalition Structure Generation
Thomas Voice, Maria Polukarov, and Nicholas R. Jennings
- General Techniques for Accelerating FPTAS for the routing and knapsack problems
Amir Elalouf, Eugene Levner
- A Sequential Competitive Resource Allocation Game
Rafael Hassin, Barak Y. Reif

10:30–10:50 **Break**

10:50–11:40 **Plenary Talk**

- Making Correct Decisions based on Incorrect Models
Assaf Zeevi

11:40–12:00 **ORSIS General Assembly**

12:00–13:15 **Lunch**

13:15–14:05 **Parallel Sessions M2**

(M2A) **Game Theory [Abirim 1]**

Chair: Moshe Haviv

- Contests with a Random Number of Players and Private Values
Moshe Haviv, Liron Ravner
- Reverse Game Theory in Case Evaluation with Differential Information
Ram Orzach, Stephen J. Spurr

(M2B) **Workforce Management [Main]**

Chair: Oded Margalit

- Applying Constraint Programming for the Identification and Assignment of Service Professionals
Sigal Assaf, Yael Ben Haim, Daniel P. Connors, Haggai Eran, Donna L. Gresh, Oded Margalit,
Michael J. Mcinnis, Julio Ortega, Yossi Richter
- Manpower allocation for service jobs: The Balayla' Model
Isaac Balayla

(M2C) **Water Management [Abirim 2]**

Chair: <TBA>

- Assessment of the intake and the pretreatment design in existing SWRO (SeaWater Reverse Osmosis) plants by Hasse Diagram Technique (HDT)
Amos Bick, Rainer Bruggemann, Gideon Oron
- Optimal multi-year management of a water supply system under uncertainty: robust counterpart approach
Mashor Housh, Avi Ostfeld, Uri Shamir

14:05–15:45 **Parallel Sessions M3**

(M3A) **Optimization and Analytics for Water Management [Main]**

Chair: Segev Wasserkrug

- Automated Leakage Identification in Water Distribution Networks using Optimization
Ofer M. Shir, Segev Wasserkrug, Yossi Shiloach, Lena Granovsky
- Minimizing the Production Costs of Providing Water
Yulia Tseytlin, Segev Wasserkrug, Lena Granovsky, Mila Keren
- Water Analytics
Einat Kermany, Yehuda Naveh, Pnina Vortman, Dan Pelleg

(M3B) **Scheduling [Abirim 1]**

Chair: Gur Mosheiov and Dvir Shabtay

- Online Scheduling of Two Job Types on a Set of Multipurpose Machines with Unit Processing Times
Dvir Shabtay, Shlomo Karhi
- Two-Machine Flow-Shop Scheduling with Rejection
Dvir Shabtay, Nufar Gasper
- A two-stage flow-shop scheduling with a critical machine and batch availability
Enrique Gerstl, Gur Mosheiov
- Scheduling problems with two competing agents to minimize minmax and minsum earliness measures
Baruch Mor, Gur Mosheiov

(M3C) **Decision Making in Queues [Abirim 2]**

Chair: Moshe Haviv and Yoav Kerner

- Dynamic Control in the Single Server Markovian Queue
Gail Gilboa-Freedman, Refael Hassin
- On the equilibrium in a two dimensional strategic game
Refael Hassin, Ricky Roet-Green
- When to arrive to a queue with tardiness costs?
Moshe Haviv
- A queueing approach to a multi class M/G/1 make-to-stock with backlog
Opher Baron, Yoav Kerner

15:45–16:05 **Break**

16:05–17:45 **Parallel Sessions M4**

(M4A) **Continuous Optimization [Abirim 1]**

Chair: Amir Beck

- A First Order Method for Solving Two-Stage Lexicographic Optimization Problems
Amir Beck, Shoham Sabach
- A Sequential Ascending Parameter Method for Solving Constrained Minimization Problems
Amir Beck, Aharon Ben-Tal, Luba Tetrushvili
- On the Solution of the GPS Localization and Circle Fitting Problems
Amir Beck, Dror Pan

(M4B) **Queueing Theory [Abirim 2]**

Chair: Uri Yechiali

- Control of Fork-Join Networks in Heavy-Traffic
Rami Atar, Avishai Mandelbaum, Asaf Zviran
- Finite Two-Queue Systems where Customers of Each Queue Are the Servers of the Other Queue
Efrat Perel, Uri Yechiali
- On the optimal service capacity allocation
Rafi Hassin, Yair Shaki
- Stability and Performance of queueing networks with infinite supply of work
Gideon Weiss

(M4C) **Topics in Operations Research 2 [Abirim 3]**

Chair: Ronny Luss

- The Split Variational Inequality Problem
Aviv Gibali
- Cheap Iterative Schemes for L0-constrained Principal Component Analysis
Ronny Luss, Marc Teboulle
- The Value of Information in a Retailer-Based Distribution Network
Assaf Avrahami, Yale T. Herer, Retsef Levi