Monday

- **MA-04 has moved to MC-04**

Title change:
- **MA-04**
  Monday, 8:30-10:00
  O4-4

**Complementarity Problems and Variational Inequalities 1**
Cluster: Mathematical Programming
*Invited session*
Chair: Sandor Zoltan Nemeth

- **MA-15**
  1. Comparative Analysis of Differential Evolution, Firefly and Genetic Algorithms on Dynamic Environments
  Burcin Ozsoydan, Adil Baykaso?lu
  2. Optimizing intrusion detection system performance in ubiquitous environments using genetic algorithm approach
  Lynda Sellami
  *Cancellation*
  Internet decision system for combinatorial optimization problems under permutation
  Lamia Trabelsi, Talel Ladhari
  4. A Genetic Algorithm Based Approach for Operator Allocation Problem in Garment Industry with the Consideration of Labour Skill Levels
  Derya Dengi, Gonca Tuncel

- **MA-50**
  1. A Markov Chain Approximation to Choice Modeling
  Vineet Goyal, Guillermo Gallego, Jose Blanchet
  2. Assortment Optimization and Pricing under Multi-Level Nested Logit Model
  Huseyin Topaloglu, Guang Li, Paat Rusmevichientong
  3. Assortment Optimization Under General Choice
  Srikanth Jagabathula, Vivek Farias, Devavrat Shah
  *Cancellation*
  Pricing Managed Lanes
  Robert Phillips

- **MC-04 has moved to MA-04**

Title change:
- **MC-04**
  Monday, 12:30-14:00
  O4-4

**Complementarity Problems and Variational Inequalities 2**
Cluster: Mathematical Programming
*Invited session*
Chair: Goran Lesaja

Title change:
- **MC-08**
  Monday, 12:30-14:00
  O3-2

**Tutorial - S. Dauzère-Pérès**
Cluster: Invited Lectures - Keynotes and Tutorials
*Invited session*
Chair: Christian Prins

- **MC-11**
  *Cancellation*
  A Column Generation Algorithm for Communication Systems with High Error Correction Capability
  Banu Kabakulak, Z.Caner Taskin, Ali Emre Pasane
  2. A new algorithm for blind separation of discrete signals used in digital communications
  Abdenour Labed
  3. A Scatter Search Algorithm for a Bi-level Topological Design of LANs
  José-Fernando Camacho-Vallejo, Julio Mar-Ortiz
  *Cancellation*
  The joint power control and spectrum allocation problem in cognitive networks
  Abdelkader Tounsi, Malika Babes

- **MC-20**
  1. Robust and cost-efficient vehicle and crew scheduling in public transport
  Bastian Amberg, Boris Amberg, Natalia Kliewer
  *Cancellation*
  Robust approach to solving optimization problems in public transportation
  G. N. Srinivasa Prasanna, Abhilasha Aswal, Anushka Chandrababu, Chethan Dhanivas, Rijutha Natarajan
  3. Re-optimization of Rolling Stock Rotations
  Markus Reuther
  4. Railway Rolling Stock Planning: Robustness Against Large Disruptions
  Leo Kroon, Valentina Cacchiani, Alberto Caprara, Laura Galli, Gabor Maroti, Paolo Toth

- **MC-32**
  *Cancellation*
A new enhancement of the heuristic for the vehicle routing problem
Andrey Zyatchin

2 - Coordination of Supply Chain with Stochastic Demand by Delay-in-Payment Contract
Xiaobo Zhao, Deng Gao

3 - RFID applications for distribution management on retail trade
Joachim R. Daduna

4 - Analysing the effects of cost allocation methods for the cooperative facility location problem
Lotte Verdonck, Patrick Beullens, An Caris, Katrien Ramackers, Gerrit K. Janssens

MC-39
Cancellation
A Hybrid Approach for Multicriteria Decision Making Methods in Assesment of Logistics Service
Vedat Koçda?, Kasim Baynal, Zerrin Alada?

2 - Best practice for major acquisitions using MCDA/AHP methodology
Eldar Aarholt

3 - Inconsistency indices in the Analytic Hierarchy Process: a numerical study
Matteo Brunelli, Luisa Canal, Michele Fedrizzi

4 - Is the AHP a suitable tool for re-calculation of human composite indices?
Josef Jablonsky

MC-41
1 - Efficiency Analysis of Japanese Private Broadcasting Using Data Envelopment Analysis
Masatsugu Tsuji

2 - Monitoring performance of hydroelectric power plants
Clara Vaz, Ângela Ferreira

3 - Incorporating the Concept of DEA-DA into the Case-Based Distance Methods for Screening
Li-Ching Ma, Pei-Pei Hsu

Paper moved to session TB-41
Measuring productivity in supply chains: Malmquist Index approach
Andres Polo

MC-51
1 - On optimal partial hedging in incomplete discrete markets
Alexey Soloviev, Vladimir Morozov

2 - An Intelligent Water Drops Algorithm Combined with Differential Evolution Algorithm for Solving Cardinality Constrained Portfolio Optimization Problems
Mualla Gonca Yunusoglu, Adil Baykaso?lu

3 - On the Impact of Copulas on VaR Forecasts: A Simulation Study
Theo Berger

Paper moved to session HB-51
Portfolio Choice in Markets with Contagion
Yacine Ait-Sahalia, Tom Hurd

MC-62
1 - Quadratic Outer Approximation for Convex Integer Programming
Long Trieu, Christoph Buchheim

2 - A Branch and Bound Approach for the Optimal Control of System Dynamics Models
Ingmar Viebau, Armin Fügenschuh

3 - Mixed Integer Gomory Cuts for Quadratic Programming: The Power of Extended Formulations
Juan Pablo Vielma, Sina Modaresi, Mustafa Kilinc

Cancellation
Intersection cuts for Mixed Integer Conic Quadratic Sets
Kent Andersen

MD-28
Cancellation
A formulation for k-partitioning and polyhedral results
Arnaud Knippel, Zacharie Ales, Alexandre Pauchet

2 - Distribution of Distance Frequencies and Efficiency of Approximate Approach to the p-Median Problem
Jaroslav Janacek, Marek Kvet

3 - Constraint programming for large-scale p-median problems in sparse networks
?tefan Pesko

4 - Partition into dense subgraphs: LocalSolver model and complexity
Julien Darlay

MD-30
1 - A New Formulation for the 0/1 Knapsack Problem
Ebru Mutlu, Özcan Mutlu

2 - Signed Graphs and their Matroids
Leonidas Pitsoulis

3 - Upper and Lower Bounds for the Maximum Number of Solutions Generated by the Simplex Method
Shinji Mizuno, Tomonari Kitahara

Cancellation
An O(n2) algorithm for computing the cycle mean of an n x n triangular Toeplitz matrix
Peter Szabó

MD-45
1 - A theory for the optimal government debt control: explicit formula for the optimal debt ceiling
Abel Cadenillas, Ricardo Huaman

2 - Alternative versions of the Global Competitiveness Ranking: a Social Choice approach
Andrey Subochev, Fuad Aleskerov, Igor Zakhlebin

Cancellation
The imperfect competition in spatially price models of economic systems
Alexey Kovalenko

Paper moved to session MC-04
A polyhedral complementarity approach for searching an equilibrium in linear exchange models
Vadim Shmyrev

MD-49
1. Measuring the model risk of contingent claims  
   Nils Detering, Natalie Packham  
2. Allocation of Risk Capital: the Lorenz method  
   Aleksandrs Smilgins, Jens Leth Hougaard  
3. Reactions of real economy on financial market instability. Results from Markov-Switching vector autoregression models  
   Magdalena Ulrichs  
   Risk Measurement and Extreme Value Theory: An Application for Emerging Financial Markets  
   Ezgi Nevruz, Ayse Arik, Ugur Karabey

**MD-55**

1. BtL vs. Fossil Fuel Supply Chains: an Economical, Ecological and Energetic Comparison  
   Harald Müller  
2. Modeling the life-cycle biogenic carbon of biomass-to-bioenergy supply chains based on a biomass production optimization system  
   Catalin Ristea, Thomas Maness  
   Multiple-objective modeling of railway transportation and storing to increasing imports of Russian wood for the energy plants  
   Teijo Palander  
4. Supply Chain Analysis of Combined Heat and Power Generation from Woody Biomass: a Case Study from British Columbia, Canada  
   Mahdi Mobini

**MD-64**

1. An attrition game on the network  
   Keiichi Sunaga, Ryusuke Hohzaki  
2. Unpredictable Patrolling  
   Ana Isabel Barros, Lanah Evers  
3. Open problems on defence situations modelled as games on a lattice  
   Noemi Zoroa, M. José Fernández-Sáez  
   A Spatial Lanchester Model with Heterogeneous Forces  
   Marcelo Villena

**MD-72**

1. A Modified Gravity Model for Mexico - U.S. Migration Data  
   Duygu Cinar, Deniz Duman, Linet Ozdamar  
2. Corporate foresight and strategic decision making: Dealing with societal complexity  
   Ulrike Reisach  
3. Is topological invariance a reasonable assumption for studying social systems too? Methodological remarks on the application of NK simulation modeling  
   Lucio Biggiero  
   Paper moved to session TD-45  
   Energy Efficiency and Climate Change  
   Sudhakara Reddy

**MD-74**

<table>
<thead>
<tr>
<th>Tuesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA-04</td>
</tr>
</tbody>
</table>
| 1. Trace-Penalty Minimization for Large-scale Eigenspace Computation  
   Yin Zhang, Zaiwen Wen, Chao Yang, Xin Liu |
| 2. A simple and original method to obtain the optimal power operating point of the solar cell  
   Jaleleddine Ben Amor  
   Paper added to session |
| 3. Inexact BOSVS Algorithm for Ill-Posed Inversion with Application to Parallel Image Reconstruction  
   Maryam Yashitini, William Hager, Hongchao Zhang |
| 4. A modification of discrete Raiffa’s solution for three-player bargaining problems  
   Milan Vlach, Theoretical Computer Science and Mathematical Logic, Charles University, Malostranske namesi 25, 118 00 Prague 1, 118 00, Prague, Czech Republic, mvlach@ksi.ms.mff.cuni.cz |

Since Nash's papers on bargaining and Raiffa's studies on arbitration schemes in the beginning of 1950's, it has become customary to present a cooperative bargaining problem as a nonempty collection B of pairs (S, d) where each S is a nonempty subset of a finite-dimensional real linear space endowed with the Euclidean metric, and d is a point in S. We propose an alternative stepwise solution for three-player problem that generalizes Raiffa’s solution. The solution is based on the existence of a unique finite stable set in the individually rational region of (S, d).

**TA-05**

1. Pareto-Nash-Stackelberg control problems: mathematical models and principles of solving  
   Valeria Ungureanu  
   A noncooperative differential game of a stochastic productive asset  
   Ricardo Josa-Fombellida, Juan Pablo Rincon-Zapatero  
3. Cooperative and non-cooperative trade-offs among design quality and cost-reducing r&d in a supply chain  
   Juan Carlos Espinoza Garcia, Fouad El Ouardighi, Victoire Denoyel  
4. Non-Linear Strategies in Differential Games: A Numerical Investigation  
   Guiomar Martin-Herran, Javier de Frutos

**TA-14**

1. Electric Load Scheduling using Genetic Algorithms  
   Carlos Henggeler Antunes, Ana Soares, Alvaro Gomes  
2. An design tool for communication networks in centralized systems of measurement of electricity consumption  
   Eduardo Martins, Jose Vicente Canto dos Santos

Cancellation  
Developing OR application skills with AIMMS: a bridge in OR education  
Ovidiu Listes  
Educational Outreach Activities: Playing OR Games!  
Paul Harper, Vincent Knight, Louise Orpin  
Production and Operations Management in the LegoFactory  
Evelyn Richards
3. Optimal Capacitor Placement to Reduce Active Losses in Distribution Systems via Bioinspired Optimization and Search Space Reduction
Ivo Chaves Silva Junior, Bruno Dias, Andre Marcato

Solving the Flight Perturbation Problem Considering Crews Constraints Using Simulated Annealing Algorithm
Amirreza Nickkar, Hassan Khaksar

Title change:
■ TA-46
Tuesday, 8:30-10:00
Y10-1

Game-theoretical applications in sustainable supply chains
Cluster: Game-theoretical Models in Operations Research
Invited session
Chair: Gokce Esen duran

■ TA-69
1. Integrated Energy Planning at the Block Level
Subhash Datta
2. The Role of Geographic Information Systems in the Energy Sector in India
Badri Toppur
3. Application of DEA to Define the Revenues of Brazilian Power Transmission Companies
Tiago Soares, Rajiv Banker, Ana Lopes

Paper moved to session WA-69
Economic Sentiment Indicator and Business Survey Liquidity Measure in Forecasting Changes in Industrial Production- the Case of Croatia
Mirjana Cizmesija, Natasa Erjavec, Vlasta Bahovec

■ TB-14
1. Vehicle routing problem for exhausted oil collection: A matheuristic approach
Roberto Montemanni, Matteo Salani, Dennis Weyland, Luca Maria Gambardella
2. A Hybrid Algorithm based on Gray Petri Net and Tabu Search for Workforce Management
Roberto Aringhieri, Bernardetta Addis, Marco Gribaudo, Andrea Grosso
3. Matheuristics for the sprint planning in agile methods
Marco Boschetti, Vittorio Maniezzo

Paper moved from session TC-14
Andreas Reinholz

Paper moved to session TC-14
Matheuristics for city logistics scenario assessment
Vittorio Maniezzo, Marco Boschetti

■ TB-15 has moved from HB-08
Tuesday, 10:30-12:00
G5-2

Keynote - S. Mehrotra
Cluster: Invited Lectures - Keynotes and Tutorials
Invited session
Chair: Christos Vasilakis

■ TB-40
1. A graphical procedure for DEA Benchmarking
Clara Simon de Blas, Jose Simon Martin, Alicia Arias
Cancellation
2. A Supply Chain Model with Time-Staged Outputs
Raha Imanirad, Wade Cook, Joe Zhu
3. Models for unbiased efficiency assessments in an additive two-stage DEA framework
Dimitris Despotis, Gregory Koronakos
4. Issues in DEA and Network DEA
Joe Zhu, Wade Cook, Kaoru Tone, Yao Chen, Chiang Kao

■ TB-41
1. Measuring the efficiency of police stations efficiency in Slovenia: an application of a multi-stage data envelopment analysis
Jernej Mencinger, Aleksander Aristovnik
2. Winerlies’ performance, response to a crisis period
Katrin Simon-Elorz, Juan Sebastián Castillo, Maria Carmen Garcia-Cortijo
Cancellation
3. Efficiency and risk in the Greek banking industry
Ioannis Tsolas

Paper moved from session HA-40
4. Estimating Technical and Allocative Efficiency of Australian Schools
John Ruggiero, Vincent Blackburn, Shae Brennan

Paper moved from session MC-41
5. Measuring productivity in supply chains: Malmquist Index approach
Andres Polo

■ TB-44
Cancellation
On the convergence to Walrasian prices in random matching Edgeworthian economies
Bruno M.P. M. Oliveira, Alberto Pinto, Luis Ferreira, Barbel Finkenstadt, Athanasios Yannacopoulos
2. Influence of individual decisions in competitive market policies
Alberto Pinto, Renato Soeiro, Abdelrahim Mousa
3. Two characterizations of the Shapley value for regression games
Enrique Gonzalez-Arangüena, Rene van den Brink, Conrado M. Manuel

■ TB-51
1. Quantile Hedging in Discrete Time
Erdinc Akyildirim
2. Investment strategies under debt issuance amount constraints
Takashi Shibata, Michi Nishihara
3. Design and Pricing of Derivative Contracts in a Spectrum Market
Aparna Gupta, Praveen Kumar Muthuswamy, Koushik Kar

Paper moved to session WD-51
### TB-60

**Cancellation**

Georgian SME business development analysis: Case Study  
Shorena Kalandarishvili, Levan Labadze

2 - The Influence of Financial Crisis on UK SMEs  
Meng Ma, Jake Ansell, Galina Andreeva

3 - Using DTW for Clustering Time Series and Finding Leading Series  
Efe Pınar, Ozden Gur Ali

4 - Incorporating measures of evolution of customer choice behavior in churn prediction  
Andrey Volkov, Dirk Van den Poel, Anita Prinzie

### TB-66

1 - Sustainable Production Planning of Multi-Product Seafood Production Planning Under Uncertainty  
Tutiarny Naibaho, Intan Syahrini, Herman Mawengkang

2 - Sustainable Production Planning of Crude Palm Oil Industry under Uncertainty  
Hendaru Sadyadharma, Herman Mawengkang

3 - A Model to minimize the spread of infectious disease based on social network  
Firmansyah Firmansyah

4 - Classification of real estate for execution of municipal functions  
Egle Klumbyte, Raimondas Bluizdzius  
*Paper moved to session HA-13*

Out-of-town shopping and its induced CO2-emissions  
Johan Håkansson, Kenneth Carling

### TB-68

1 - Dynamic Programming with Quantifier Elimination  
Akifumi Kira, Hidenao Iwane, Hirokazu Anai

2 - A stochastic and dynamic approach for maintenance planning with multiple machines  
Raha Akhavan-Tabatabaei, Luis Annear, Verena Schmid  
*Cancellation*

Hybrid synchronisation of different hyperchaotic systems using adaptive control  
Sudipta Chakraborty

### TB-72

1 - Optimal Observation Times for a Partially-Observable Pure Birth Process  
Ali Eshragh

Cancellation

Screening Policies for Alzheimer's Disease  
Zehra Onen, Serpil Sayin

3 - Appointment capacity planning in specialty clinics with no-shows and cancellations: a queueing approach  
Navid Izady

4 - Training Support Vector Machines by Using Particle Swarm Optimization and a Bone Age Example  
Hüseyin Hakl?, Gür Emre Güraks?n, Harun U?uz

### TC-04

1 - Vendor Selection and Determination of Supply Quotas by using Revised Weighting Method and Multiple Objective Linear Fractional Programming Techniques  
Tunjo Peri?

2 - Financial Structure Optimization by Using Multiple Objective Fractional Linear Programming Methods  
Zoran Babic  
*Cancellation*

Solving multiple objective fractional linear programming models by using goal programming techniques  
Jadranka Kraljevi?

4 - Feed blend optimization by using a multiple objective programming model  
Vedran Horvatic

### TC-13

1 - Modeling effect of car ownership on activity time allocation  
Yan Yin, Zhi-chun Li

2 - A Simulation Based Optimization Method in Determining Time Varying Pricing of Toll Roads  
Lei Zhang, Xiang He, Xigun (Michael) Chen, Chenfeng Xiong

3 - Throughput and waiting times at unsignalised intersections  
Hannah Van den Bossche, Dieter Fiems, Herwig Bruneel  
*Cancellation*

Offering more choices to travellers to mitigate undesired boundary effects of traffic congestion charging  
Yingen Ge  
*Paper moved from session WC-35*

5 - A Traffic Equilibrium Model with Paid and Unpaid Parking  
Renger van Nieuwkoop, Thomas Rutherford

### TC-14

1 - MILP based heuristics using Corridor Method to solve rural electrification projects,  
Joan Triado, Laia Ferrer-Martí, Alberto García-Villoria, Rafael Pastor

2 - A Hybrid Approach for the Multi-objective Assignment Problem  
Mustapha Ratli, Bassem Jarboui, Sylvain Lecomte, Rachid Bennour, Christophe Wilbaut

3 - A genetic algorithm- LP combined model to optimize the lifetime of wireless sensor networks  
Ayse Cilacı Tombus, Onder Tombus  
*Paper moved from session TB-14*

4 - Matheuristics for city logistics scenario assessment  
Vittorio Maniezzo, Marco Boschetti  
*Paper moved to session TB-14*

An integrated Modeling and Optimization Methodology for Rich Vehicle Routing Problems  
Andreas Reinholz
1 - Environmental Effects of EVs and Location of Charge Stations
   Damla Sener, Metin Turkay

2 - stochastic network design problem under probabilistic constraints with continuous random variables and efficient methods to solve them.
   Olga Myndyuk

3 - An efficient exact solution approach for the Traveling Repairman Problem on a Line
   Stefan Bock

   Paper added to session

4 - Multi-commodity reliable facility location problem: A scatter search based approach
   Sumanta Basu, Operations Management, Indian Institute of Management Calcutta, K-302, New Academic Block, IIM Calcutta, D.H. Road, Joka, 700104, Kolkata, West Bengal, India, sumanta@iimcal.ac.in, Megha Sharma, Partha Sarathi Ghosh

   Logistics and supply chain network design problems are often modelled as discrete facility location problems. A majority of these models assume that the facilities once located, will be available all the time. This assumption does not hold true in reality. We relax this assumption in the context of the single stage multi-commodity capacitated facility location problem and incorporate the non-availability of facilities. We develop a scatter search based solution approach for this problem and compare the results obtained by using different criteria for selecting the facilities.

TC-21

1 - Due Date Assignment in Dynamic and Stochastic Single Machine Environments with Family Setups
   Zehra Duzgit, Ali Tamer Unal

2 - Multi-project scheduling under mode duration uncertainties
   Gündüz Ulusoy, Emre Arda Sisbot, Can Akkan

   Cancellation

   Three new state space collapse results for the multiclass G/G/1 queue
   Rami Atar

4 - Heavy-traffic analysis of a multi-class queue with relative priorities
   Ane Izagirre

TC-40

1 - DEA Models for Estimating Efficiency When Inputs (Outputs) Are Not Substitutes
   Darold Barnum, John Gleason

2 - Returns to Scope: A Metric for Production Synergies Demonstrated for Hospital Production
   Andrew Johnson, Brandon Pope

3 - Consolidating Productivity Stylized facts at the micro level: a General Framework
   Cinzia Daraio

   Cancellation

   Directional Elasticity of Scale for Research Institutes via DEA
   Wenbin Liu

TC-49

1 - Optimal control problem of stochastic switching system with delay
   Charkaz Aghayeva

2 - Short-Time Work As A Stochastic Control Process Of Labour Input Under Uncertainty
   Kilian Niedermayer

Cancellation

The Application of H-J-B Method in stochastic modelation for volatility with persistence: The Mexican Case Index
Guillermo Sierra

TC-57

Cancellation

Competing Though Cooperatives
Sudheer Gupta, Omkar Palsule-Desai

2 - Advance Selling without Showing the Price? The Roles of Anecdotal Reasoning and Capacity
   Tingliang Huang, Ying-Ju Chen

3 - Supply Chain Coordination under Competition
   Guillermo Gallego, Masoud Talebian

4 - Knowledge Creation in a Three-Stage New Product Development Process
   Cheryl Gaimon, Janice Carrillo, Wenli Xiao

TC-66

1 - MRP optimization model for a production system with remanufacturing
   Fernanda Raupp

   Cancellation

   Quick Response and inventory management in the apparel industry: the fast fashion in Minas Gerais
   Priscilla Ribeiro, Andre Golobovante

3 - A Novel Mixed Integer Linear Programming Model for the Strategic Planning of a Reverse Supply Chain Network
   Ernesto D.R.S Gonzalez, Nelson Maculan

4 - Sustainable Large-Scale Mining Network Design
   Bruno Pimentel

   Title change:

   TC-70

   Tuesday, 12:30-14:00
   R19-4

   Meeting of decision analysis groups and societies

   Cluster: Decision Processes

   Invited session

   Chair: K. Nadia Papamichail

TC-74 has moved to TD-38

TD-05

1 - Inventory Control with Piece-wise Linear Convex Variable Production Cost and Fixed Cost
   Miao Song, Ye Lu

2 - Inventory model with pricing and inventory-dependant demand
   Andreas Novak, Richard Hartl, Peter M. Kort

   Paper moved to session HB-05

   Optimal control problem for continuous inventory within the stochastic semi-Markov model with periodical consumption termination
   Alexey Ivanov, Peter Shourkoff

TD-14
1 - Simultaneous multi-objective beam angle and fluence map optimisation in intensity modulated radiation therapy
Guillermo Cabrera G., Matthias Ehrgott, Andrew J Mason

2 - An evolutionary multi-objective simulation optimization and decision making approach for buffer allocation problem
Simge Yelkenci Kose, Ozcan Kilincici

3 - The multiple travelling salesperson problem with hotel selection
Marco Castro, Kenneth Sørensen, Peter Goos, Pieter Vansteenwegen
Cancellation
Feature Selection as Set Covering solved with Probabilistic Cellular Automata
Benedetto Scoppola, Giovanni Felici, Sokol Ndreca, Aldo Procaccì, Emanuele Weitschek

■ TD-26 has moved to WD-27
■ TD-26 has moved from WD-27
Tuesday, 14:30-16:00
G9-7
Large-scale vehicle or crew scheduling problems solved with constraint aggregation
Cluster: Combinatorial Optimization II
Invited session
Chair: Francois Soumis

■ TD-30
1 - Polygon deformation approach - a new linear integer formulation for the tsp model
Elias Munapo
2 - Proof of the first part of the conjecture of aouchiche and hansen about the randic index
Lilijana Pavlovic, Tomica Divnic
3 - Evaluation of linear discriminant functions by mathematical programming
Shuichi Shinmura
Paper added to session
4 - The longest orderly coloured path problem: a model for 3D NMR pathway reconstruction
Maria Cristina De Cola, Sapienza - University of Rome, Italy, mariacristina.decola@uniroma1.it, Giovanni Felici, Marta Szachniuk, Dominique de Werra, Jacek Blazewicz

■ TD-38 has moved from TC-74
Tuesday, 14:30-16:00
G7-2
EDDA Finalists
Cluster: Prizes
Invited session
Chair: Silvano Martello

■ TD-45
1 - Congestion Management in Electricity networks: evidence from EU electricity markets
Silvia L. Vitiello
2 - Optimum Energy Portfolio using Genetic Algorithm with Random Walk Selection
Secil Ercan, Gulgun Kayakutlu
3 - Optimization of Turkey's Natural Gas Policy using Fuzzy Mathematical Programming
Serhat Tüzün, Tuğan Demirel
Paper moved from session MD-72
4 - Energy Efficiency and Climate Change
Sudhakara Reddy

■ TD-57
1 - Retail pricing and promotion design through customer segmentation
Pavankumar Murrali, Wei Sun, Anshul Sheopuri
Cancellation
Optimal Timing for a Newsvendor Problem with In-season Price Adjustment
Fior Stali'ski, Chia-Shin Chung
3 - Chasing Demand: Pricing and Learning in a Changing Environment
Bora Keskin, Assaf Zeevi

■ TD-60
1 - Modelling the Extreme Precipitation Data: Case Study from Turkey
Buşra Aksoy, Vilda Purutcuoğlu, Inci Batmaz, Ceylan Yozgatlıgil
2 - Cross-Selling Models for Private Banking — Which data are useful?
Özden Gar Ar, Haldun Ayılg, Mehmet Hamdi Ozcélık
3 - The Use of a Memetic Algorithm at the Evacuation Plan Design
Lubomir Toman
Cancellation
Customers Walking Patterns and Influence on Their Shopping Behavior
Marina Khodol

■ TD-73
1 - Optimization in livestock feed distribution: a case study.
Mª Luisa Carpente, Balbina Casas-Méndez, Ana Cerdeira-Pena, Juan Ramón Nogueira
2 - Optimization of the recipient’s herd in a program of horse cloning.
Alline Reis, Michel Nakhla, Othman Mounim Abdou
3 - Implementing Balanced Scorecard in Chilean Wineries
Sergio Maturana, Lionel Valenzuela
Paper moved to session HA-37
Milk Collection Using Trucks and Trailers
Urooj Pasha, Arild Holf, Arne Løkketangen
Wednesday

■ WA-08 has moved to HA-08

Title change:
■ WA-08

Wednesday, 8:30-10:00
O3-2

Tutorial - R. Vohra
Cluster: Invited Lectures - Keynotes and Tutorials
Invited session
Chair: Kenneth Sörensen

■ WA-57
1 - Using the Newsvendor Game as a new research environment for behavioral OM and Marketing
Abraham Seidmann, Tong Wu

2 - Optimizing Skippable and Non-Skippable Advertisements for Video Sharing Websites
Soumyakanti Chakraborty, Sumanta Basu, Megha Sharma
Cancellation
New product pricing policy and reward programme in the existence of taste effect and word of mouth effect
Wu Lingli

■ WA-66
1 - Green innovation abilities of companies in turkish manufacturing industry
Bahadır Yörür, Gülsen Akman
Cancellation
The Lean-and-Green Supply Chain Debate: An Australian Case Study
Behnam Fahimnia, Joseph Sarkis, Ali Eshragh, Mohsen Varsei

2 - Identification of sustainable development features and measurement of their importance in the supply chain management: case of mobile phones
Merja Halme, Anu Bask, Markku Kallio, Markku Kuula

3 - Strategy, Investment and New Services Development Path in Retail Industry by using Dynamic Capabilities in Aspects of Path Dependency and Real Options: The Case of KOCTAS
Özcan Çavusoglu, Nevin Dönmez

■ WA-69
1 - Closed-Loop Supply Chain Network Design Model For Remanufacturing in Turkey’s Mobile Phone Market
Asli Özmen, Ismail Erol

2 - Performance Efficiency of DMMMSU Colleges and Institutes: A Data Envelopment Analysis (DEA) Study
Milagros Baldemor

3 - Mechanisms for resolving framework of conflict in the border area of transition from one state to another in the logistics and customs sphere
Irina Kazina
Paper moved from session TA-69

4 - Economic Sentiment Indicator and Business Survey Liquidity Measure in Forecasting Changes in Industrial Production- the case of Croatia
Mirjana Cizmesija, Natasa Erjavec, Vlasta Bahovec
Cancellation
Online Global Trading Marketplace as a Buyer-Seller Social Network: A Study of Implicit Social Interactions in Developed versus Emerging Markets
Yubo Chen, Qi Wang, Jinhong Xie, Jurui Zhang

■ WA-70
1 - The effect of the ethical leadership on perceived organizational justice and organizational identification of the employees: the case of tourism businesses
Yükrân Öktem, Hakan Turgut, Gözde Kubat

2 - Identifying a System of Bribery in Business Transactions
Sule Onsel Ekici, Ahmet Ekici

3 - Study of awareness rate of patients from prism of patient rights.
Mohammad Reza Bateni, Shahla Shiranifard
Cancellation
The contribution of corporate governance to bank stability
Aristotelis Boukouras, Davide Mare

■ WB-05
Cancellation
Using Nonlinear Model Predictive Control for Dynamic Decision Problems in Economics
Willi Semmler

2 - An Efficient Condensing Technique Suited for MHE Arising in NMPC for instationary Partial Differential Equations
Gregor Kriwet

3 - Nonlinear Model Predictive Control (NMPC) of Non-Stationary Partial Differential Equations
Ekaterina Kostina

4 - Conditions for a weak minimality in optimal control problems with integral equations of Volterra type
Andrei Dmitruk, Nikolai Osmolovskii

■ WB-12
1 - Tackling key strategic decisions of the chocolate-producing companies: A system dynamics approach
Tatiana Boyarskaya, Evgenia Ushakova

2 - Group Buying Schemes – A Sustainable Business Model?
Sebastian Koepp, Aliaksei Mukhachou
Cancellation
Bootstrapping for Confidence Interval Estimation in the Taylor Rule Model for Monetary Policy in Brazil
Felix Neugebauer

4 - Modelling a Sovereign Debt Crisis: the case of Jamaica
Brian Dangerfield, Jude Lewis

■ WB-47
1 - Assortment Planning of a Configurable Product
Ratna Babu Chinnam, Edward Umpfenbach
2 - Revenue Management Models with Financial Hedging
Gülce Sar?, Fikri Karaesmen, Suleyman Ozekici

3 - Companies' Financial Success using Electronic Managerial Tools
Snjezana Pivac, Ivana Tadic
Cancellation
Advances In Profit-Driven Order Promising For Make-To-Stock Environments — A Case Study
With A Canadian Softwood Lumber Manufacturer
Rodrigo Cambiaghi Azevedo, Sophie Dumours, Mikael Rönqvist

■ WB-57
1 - Learning and Intelligent Optimization (LION) for Multiobjective Problems
Roberto Battiti, Mauro Brunato

2 - Social Network Analysis for detecting Spider Constructions in Social Security Fraud: New insights and challenges
Véronique Van Vlasselaer, Dries Van Dromme, Bart Baesens

3 - A Case-Based Reasoning Approach to Radiotherapy Treatment Planning for Brain Tumour
Sanja Petrovic, Gulmira Khussainova, Rupa Jagannathan
Paper added to session

4 - Profit-based Feature Selection for Churn Prediction using Support Vector Machines
Alvaro Flores Ríos, MGO, Universidad de Chile, 12345, Santiago de Chile, Chile, afloresr@eversis.com
Databases have increased their size in all areas of knowledge, considering both the number of instances and features. For the particular case of customer churn prediction in the telecommunication sector, this amount of data may cause several problems to data mining algorithms in terms of performance and scalability. In this work we present an SVM-based feature selection method that identifies relevant attributes by considering the expected profit of an eventual retention campaign as a contribution measure.

■ WB-65
1 - Lean is "in" for financial service companies, but not really "within"
Michael Leyer

2 - An opportunistic maintenance policy for components in complex systems under condition monitoring
Hao Peng, Qiushi Zhu, Geert-Jan van Houtum

3 - ROC Analysis on Selection Problem of Solder Paste Inspection Machines
Ipek Deveci Kocakoç, Gokce Baysal
Cancellation
An application of the DEA methodology to Bordeaux wine classifications
Tatiana Bouzdine Chameeva

■ WB-66
1 - Closed loop supply chain networks design in Presence of Distributed Generation(DG): Benders decomposition approach
Salman Khodayifar, Hassan Salehi Fathabadi, Mohammad Ali Raayatpanah, Hamed Rahimian

2 - Green vehicle routing problem with time windows
Asli Aksoy, Seval Erol, Ilker Küçüko?lu, Nursel Ozturk
Cancellation
Are carbon footprint become a barrier trade for developing countries?
Mahmoud Nawar

4 - Distribution centers to improve the supply chain efficiency and sustainability of the system.
Elisabeth Freitas Rodrigues, Nelio D Pizzolato

■ WC-07
1 - Solving polynomial bilevel problems
Philipp Renner

2 - Containment problems for polytopes and spectrahedra
Christian Trabandt, Kai Kellner, Thorsten Theobald

3 - Using column generation to improve the sum of squares representation of a polynomial optimization problem
John Mitchell, Tim Lee
Cancellation
Lower Bounds for a Polynomial on a basic closed semialgebraic set using geometric programming
Mehdi Ghasemi

■ WC-13
1 - Analysis and simulation of the Bullwhip Effect in a supply chain
Pasquale Carotenuto, Francesca Romana Cellucci, Stefano Giordani

2 - Optimal design of process-inventory network considering partial backlogging
Gyeongbeom Yi
Cancellation
Analysis of the production chain of alpaca fiber in the region of Puno, Peru
Gladys Maquera, César Beltrán Castañón

4 - An integrated approach in modeling and simulating production and transactional systems
Nicola Venturi, Francesco Aggogeri, Gian Mauro Maneia, Marco Mazzola, Angelo Merlo, Nicola Pellegrini

■ WC-18
1 - The Simulation Design and Analysis of Distributed Systems: JAVA-RMI, CORBA and WEB SERVICES
Hassina Nacer, Adel-aissanou Karima, Djamil Aissani
Cancellation
An Evaluation of Order Picking Strategies in a Picker-to-Part Warehousing System Using Simulation
Gonca Tuncel, Gökçeçićek Tuna Ta?'o'?lu

3 - A Simulation Approach to the Light Pipe Packing Problem
Giovanni Lizarraga, Tomas Salais, Jania Saucedo

4 - Experiments in Making Simulations Faster with Multi Core Processors
Mark Elder

■ WC-26
1 - The Micks: A polynomial class of ”strong” inequalities for the packing knapsack
Sunil Chopra, Sangho Shim

2 - Localized Local Branching
Emanuele Manni, Gianpaolo Ghiani, Gilbert Laporte
Cancellation
On cut generating sets and their use in mixed integer programming
Egon Balas

Paper added to session 4 -
A Reduced-Cost Iterated Local Search Heuristic for the Fixed Charge Transportation Problem
Paolo Toth, DEIS, University of Bologna, Viale Risorgimento 2, 40136, Bologna, Italy, paolo.toth@unibo.it, Erika Buson, Roberto Roberti
The Fixed Charge Transportation Problem (FCTP) generalizes the Transportation Problem by considering an additional fixed cost for sending a flow from an origin to a destination. We describe an ILS heuristic based on reduced costs to guide the restart phase. The reduced costs are obtained by a lower bounding procedure that computes a sequence of increasing lower bounds by solving a three-index formulation strengthened with valid inequalities. The heuristic provided new best-known upper bounds on 123 of the 124 open benchmark instances from the literature within five minutes of computing times.

WC-28
1 - Cutting-plane Decomposition Methods for Optimization Problems with Stochastic Order Constraints
Dimitri Drapkin, Rüdiger Schultz
2 - Stochastic Shape Optimization with Dominance Constraints
Rüdiger Schultz
3 - Bilevel stochastic models of coordinated service provision with independent risk neutral and risk averse agents
Paolo Pisciella, Alexei Gaivoronski
Cancellation
Selection of connectivity portfolio for cloud service provision under demand and connection quality uncertainty
Alexei Gaivoronski, Per Jonny Nesse

WC-29
1 - A Markov model for measuring service levels in nonstationary G(t)/G(t)/s(t)+G(t) queues
Stefan Creemers, Mieke Defraeye, Inneke Van Nieuwenhuyse
2 - Estimating the Sensitivity of Rare Events via the Malliavin Calculus
Michael Zazanis
3 - Approximate solutions to time-dependent queues
Jeff Griffiths
Cancellation
The Geo/G/1/discrete-time retrial queue
Louiza Berdjoudj

WC-32
Cancellation
Optimization models for Component Procurement and End-Product Assembly in Supply Chains Subject to Demand and Supply Uncertainty
Ramesh Bollapragada
2 - Modelling the risk management in logistics customs activity in an international supply chain
Elena Smirnova
3 - Make-to-Stock or Make-to-Order? Optimal Policies for Supply Strategies under Uncertainties
Xiang Zhu

WC-35
1 - Efficient Solution Procedure for Supplier’s Production Planning with Uncertain Advance Demand Information
Nobuyuki Ueno, Koji Okuhara, Takashi Hasuike
2 - Interval Arithmetic for Material Requirements Planning in Build-to-Order Car Manufacturing
Thomas Stuebklein
3 - Auction-based selling of residual capacities in BTO-automobile production with loss-averse customers
Andreas Matzke, Thomas Völling, Thomas Spengler
Paper moved to session TC-13
A Traffic Equilibrium Model with Paid and Unpaid Parking
Renger van Nieuwkoop, Thomas Rutherford

WC-49
1 - The Impact of dog celebrity type and consumer involvement on the efficiency of internet banner advertisement in the dog-allowed restaurant
Chin-Yi Fang, Chieh-Ju Chu
Cancellation
Balancing the trade-off between privacy and profitability in social media using NMASNT
Devina Vyas, Rahul Ranjan, Charul Charul, Durga Prasad Gunjoju
3 - Deploying Dynamic Ensemble Selection To Tackle Concept Drift in Predictive Customer Analytics
Koen W. De Bock

WC-52
1 - Hybrid logistic curves and contradictions based approach for long-term technology forecasting
Roland De Guio, Dmitry Kucharavy, Arturo Niño de Zepeda
2 - Forecasting innovation diffusion with limited data: a missing data approach
Christos J. Emmanouilides
Cancellation
Econometric Modeling and Forecasting of the Mobile 3G markets
Mohsen Hamoudia

New session:

WD-08
Wednesday, 14:30-16:00
O3-2
Keynote - F. Vanderbeck
Cluster: Invited Lectures - Keynotes and Tutorials
Invited session
Chair: Gerhard-Wilhelm Weber

WD-22
1 - A heuristic solution approach for the assembly line worker integration and balancing problem
Mayron César Oliveira Moreira, Alysson M. Costa, Cristobal Miralles
Cancellation
Effectiveness of assigning intermediate milestones to outsourced projects for avoiding tardy completion
Changmuk Kang, Byung-Cheon Choi

3 - Scheduling a Satellite Downlink: Real Time Solutions for a Constrained Minimization Problem
Fattaneh Cauley, Stephen Cauley

4 - On scheduling models for the multiple carrier frequency assignment problem with cumulative interferences
Christian Artigues, Kata Kiatmanaroj, Laurent Houssin
Paper moved from session HB-24

5 - Timetabling of sorting slots in a warehouse under scheduling constraints
Antoine Jouglet, Dritan Nace, Christophe Outteryck

■ WD-27 has moved to TD-26
■ WD-27 has moved from TD-26
Wednesday, 14:30-16:00
G9-8

Integral Simplex Using Decomposition
Cluster: Combinatorial Optimization I
Invited session
Chair: Francois Soumis

■ WD-34
1 - An inventory optimization technique based in minimizing lost sales
Fernando Paredes, Javier Pereira, Claudio Fuentes

2 - Myopic replenishment policies for lost-sales inventory systems
Marco Bijvank

3 - A New Heuristic For an Inventory System with Random Yield and Positive Lead Time
Wanrong Ju, Adriana F. Gabor, Jan-Kees van Ommeren
Cancellation
Optimal control of an inventory-production system with state-dependent random yield
Gudrun Kieselmüller

■ WD-35
Cancellation
Trucks fleets routing for vehicle transportation
Alain Nguyen, Jean-philippe Brenaut

2 - Incorporating inventory decisions in location-routing problems
Wenyih Lee

3 - A leveled inventory routing approach for planning periodic milk-runs
Martin Grunewald, Thomas Volling, Thomas Spengler

■ WD-51
1 - Multilevel Monte Carlo Methods for Pricing of American Options
Denis Belomestny

2 - A Riskless Asset Strictly Enhances the Best Sharpe Ratio in a Multi-Period Setting
Li Zhongfei

3 - Multilevel policy iteration for pricing American options
Marcel Ladkau, Denis Belomestny
Paper moved from session TB-51

4 - Data Sampling Frequency and Stochastic Processes of Bond Rates and Currencies
A. Can Inci

■ WD-62
1 - OR and finance
Alex Fleischer

2 - “The complexity of demand forecast in the age of macro-economic instability” — A statistical modeling solution
Saumik Barua, Sandip Mukherjee
Cancellation
Forecasting the tail density of financial time series: a mixture autoregressive model approach
Mary Akinwemi, Georgi Boshnakov

■ WD-74
1 - Uncovering the hidden world of O. R.; the secret science of system improvement
Geoff Royston

2 - Improving the Relevance and utility of Evaluation in Educational Development Processes: A Viable Systems Approach
Diane Hart, Alberto Paucar-Caceres

3 - Two-variable linear programming: a graphical tool
Susana Fernandes, Jose Pereira
Cancellation
A Dynamic Nonlinear Model for Educational Systems: A Simulation Study for Primary Education
Roy Zúñiga, Luis Lopez
Paper moved from session HA-12

5 - Decoding the dynamics of crime
Luis Lopez, Roy Zúñiga

Thursday

■ HA-08 has moved to WA-08
■ HA-08 has moved from WA-08
Thursday, 8:30-10:00
O3-2

Tutorial - G. Raidl
Cluster: Invited Lectures - Keynotes and Tutorials
Invited session
Chair: Tamás Terlaky

■ HA-12
1 - Solving Generalized Nash Games with Shared Constraints through Evolutionary Variational Inequalities
Monica-Gabriela Cojocaru

2 - Optimal Strategy and Pricing on the CLSC with Buy-back and Remanufacturing
Zhaowei Miao, Zhiqiang Xia
3 - A System Dynamics application to strategic marketing
Suzanne van Staveren, Rasa Cincyte

Paper moved to session WD-74

Decoding the dynamics of crime
Luis Lopez, Roy Zaniga

■ HA-13
1 - Sustainability evaluation of urban mobility projects using ideal-solution based multicriteria decision making techniques
Anjali Awasthi, Hichem Omrani, Philippe Gerber

2 - Sustainable Urban Mobility in Porto Alegre: Models for a Host City for World Cup Football 2014
Eveton da Silveira Farias, Denis Borenstein

3 - Harnessing Consumer Flexibility in Car-sharing
Philipp Stroehle, Christoph Flath

Paper moved from session TB-66

4 - Out-of-town shopping and its induced CO2-emissions
Johan Halansssoon, Kenneth Carling

■ HA-16
1 - Testing TSP crossover operators within the VRP environment
Robert Manger, Krunoslav Puljic

2 - Parallel k-opt heuristic for node routing problems on graphics processing units
Briseida Sarasola, Erich Mraz

3 - A simulated annealing heuristic for the open vehicle routing problem with cross-docking
Vincent F. Yu, Hsiu-I Ting

Cancellation

Battery exchange station location-routing problem with capacitated electronic vehicles
Jun Yang, Hao Sun

■ HA-17
1 - Designing liner shipping networks
Judith Mulder, Rommert Dekker

2 - An algorithm for solving the time-constrained multicommodity flow problem with applications in liner shipping network design
Christian Vad Karsten, David Pisinger, Stefan Ropke

3 - A branch-and-price approach to the network design problem in liner shipping
Kristian Thun, Henrik Andersson

Cancellation

A decision support tool for liner shipping network design
Berit Dangaard Broer, Guy Desaulniers

■ HA-36
1 - A hybrid algorithm of Particle Swarm Optimization and Genetic Algorithms for the non-guillotine two-dimensional single knapsack problem
Luis Miguel Escobar Falcón, David Álvarez, Eliana Mirledy Toro OCampo, Rubén Augusto Romero Lázaro

Cancellation

Applying packing algorithms within a manufacturing automation context in a concrete factory
Andrey Ermakov, Anton Ryzhikov, Anton Firsov

3 - A New Branch-and-Cut Algorithm for the Orthogonal Strip Packing Problem
Marat Mesyagutov, Guntram Scheithauer, Gleb Belov

■ HA-37
1 - Robust linear multi-objective optimization with uncertain weights
Cristian Palma

2 - How robust is the elicitation of criteria weights through Simos’ procedure?
Nikos Tsotsolos, Eleftherios Siskos, Nikos Christodoulakis

3 - On the robustness of representative value functions in multicriteria classification problems
Constantin Zopounidis, Michael Dounmpo

Paper moved from session TD-73

4 - Milk Collection Using Trucks and Trailers
Urooj Pasha, Arild Hoff, Arne Løkketangen

■ HA-40
1 - Performance Evaluation of Regional Railways: Case of I.R. Iran Railway
Hamid Reza Ahadi, Zahra Saghian

2 - Evaluating the performance of UEFA Champions League scorers
Christos Papahristodoulou

3 - Evaluation of undergraduate courses using a non-radial Data Envelopment Analysis model
Silvio Gomes Júnior, João Carlos Soares de Mello, Lidia Angulo-Meza, Arene Gomes, Gilson Lima

Paper moved to session TB-41

Estimating Technical and Allocative Efficiency of Australian Schools
John Ruggiero, Vincent Blackburn, Shae Brennan

■ HB-02
1 - Analysis of threshold dynamics of epidemic models in a periodic environment
Cansu Evcin, Ömür Ugur

2 - Higher-Order Numerical Methods for the Discrete Dynamics and Anticipation of Genetic Regulatory Systems
Ozlem Dafterli, Armin Fügenschuh, Gerhard-Wilhelm Weber

3 - Constrained Nonlinear Optimization Problem with Fractional Order Dynamical System
Firat Evirgen

Cancellation

Modified Adaptive Control Method for synchronization of fractional order chaotic systems
Subir Das

■ HB-05
1 - Growth Rates and Average Optimality in Risk-Sensitive Markov Decision Chains
Karel Sladky
3 - Stochastic optimal control problem for linear switching systems  
Nergiz Kasimbeyli, Charkaz Aghayeva

4 - Optimal control of a two-state markov chain  
Eugene Khmelnitsky

Paper moved from session TD-05

5 - Optimal control problem for continuous inventory within the stochastic semi-Markov model with periodical consumption termination  
Alexey Ivanov, Peter Shourkoff

■ HB-08 has moved to TB-15

■ HB-24

1 - A Mathematical Modeling Approach to Sports Tournament Problem  
Mujgan Sagir

2 - A MILP model for the Strategic Capacity Planning in Universities  
Rocio de la Torre, Manuel Mateo, Amaia Lusa

3 - Effects of Headway Variations on Railway Timetable Robustness: an Application from the Swedish Southern Mainline  
Anders Peterson, Fahimeh Khoshniyat, Johanna Törnquist Krasemann

Paper moved to session WD-22

Timetabling of sorting slots in a warehouse under scheduling constraints  
Antoine Jouglet, Dritan Nace, Christophe Outteryck

■ HB-47

1 - Resource Revenue Management for touristic packages composition  
Adriana Novaes, Giovanni Righini

Cancellation  
An Airfreight Forwarder’s Resource Planning and Revenue Management  
Wen He, Lawrence C. Leung, Yer Van Hui

3 - Pricing and Inventory Decisions in Competing Supply Chain Networks: The Duopoly Case  
Lambros Pechlivanos, Panos Seferlis

4 - On Pricing and Composition Multiple Bundles  
Alejandro Cataldo, Juan-Carlos Ferrer

■ HB-74

1 - Teaching Business Analytics to Undergraduate Students with R AnalyticFlow  
Yuji Nakayama, Tomonori Ishigaki, Nagateru Araki, Hiroyuki Morita, Masashi Kondo

2 - Determining the most appropriate special education and rehabilitation center by the moora method  
Gökkan Özçelik, Emel Kızılkaya Aydoğan, Cevriye Gencer

Cancellation  
O.R. education administration  
Erwin Reizes