

■ MA-01

Monday, 9:00-10:20

Aula Magna

Keynote Talk 1

Chair: *Gerhard-Wilhelm Weber*

1 - Safe tractable approximations of chance constraints

Arkadi Nemirovski

■ MA-02

Monday, 9:00-10:20

3.2.14

Combinatorial Optimization I

Chair: *Ivana Ljubic*

1 - Spanning trees with node degree dependent costs and knapsack reformulations

Pedro Moura, Luis Gouveia

2 - Solving the stochastic Steiner tree problem by branch-and-cut

Bernd Zey, Immanuel Bomze, Markus Chimani, Michael Juenger, Ivana Ljubic, Petra Mutzel

3 - Exact and heuristic algorithms for the bounded cycle cover problem

Irene Loiseau

4 - Reverse multistar inequalities and vehicle routing problems with lower bound capacities

Luis Gouveia, Juan José Salazar González

■ MA-03

Monday, 9:00-10:20

3.2.15

TSP

Chair: *José A. Moreno-Pérez*

Chair: *Noraini Mohd Razali*

- 1 - An algorithm for solving the traveling salesman problem (tsp) based on multimodal transport, using a sequence of linear problems (lp)**

Luis Moreno, Javier Diaz, Gloria Pena

- 2 - A modified electromagnetism-like algorithm for travelling salesman problems with precedence constraints**

Alkin Yurtkuran, Erdal Emel

- 3 - Performance comparison between different ga selection strategies in solving TSP instance.**

Noraini Mohd Razali, John Geraghty

- 4 - A data mining based heuristic approach for solution of travelling salesman problem**

Hande Gulkac, Semiye Gönülol, Ahmet Cihan, Halenur ?ahin, Alpaslan Figlali

■ MA-04

Monday, 9:00-10:20

3.2.13

Scheduling with metaheuristics

Chair: *Lionel Amodeo*

Chair: *Farouk Yalaoui*

1 - Single machine scheduling with rejection: minimizing total weighted completion time and rejection cost

Atefeh Moghaddam, Farouk Yalaoui, Lionel Amodeo

2 - A tabu search algorithm for order acceptance and scheduling

Bahriye Cesaret, Ceyda Oguz, Sibel Salman

3 - Approximate methods for solving the operating room planning problem

Jose M. Molina-Pariente, Jose M Framinan, Paz Perez Gonzalez

4 - A GRASP approach to the multi-task employee timetabling problem

Pilar Tormos, Antonio Lova

■ MA-05

Monday, 9:00-10:20

3.2.16

Theory

Chair: *Gustavo Melo*

Chair: *Zahira Benkhellat*

1 - Analysis of software for the ngs technology: the survival guide

Bruno Vieira, Francisco Pina Martins, Sofia Seabra, Octavio Paulo

■ MA-06

Monday, 9:00-10:20

8.2.30

DEA Methodology I

Chair: *Dimitris Despotis*

1 - DEA approach for evaluating performance considering institution goal

Sheu-hua Chen, Hong Tau Lee

2 - Assessing robustness in additive DEA with interval measurements

Maria Gouveia, Luis C. Dias, Carlos Henggeler Antunes

3 - A proposition of the minimum distance model in network DEA

Tohru Ueda, Hirofumi Amatatsu

4 - An improving approach for estimating return to scale in DEA

Maryam Allahyar, Mohsen Rostamy-malkhalifeh

■ MA-07

Monday, 9:00-10:20

8.2.47

Recent Developments in Mathematical Programming

Chair: *Gerhard-Wilhelm Weber*

Chair: *Jerzy Filar*

1 - A relax-and-fix lagrangean relaxation based algorithm for a class of multiple-choice integer problems

Abdelkader Sbihi

2 - An optimization method for solving assembly line balancing problem

Sukran Seker, Mesut Özgürler

3 - Geo-spatial data mining by model-based clustering methods

Francisco Figueiredo, José G. Dias

4 - Alternating proximal algorithms and hierarchical selection of optima in games, control and pde's

Juan Peyrouquet, Hedy Attouch, Marco Czarnecki

■ MA-08

Monday, 9:00-10:20

6.1.36

Project Management Software and Applications

Chair: *Norbert Trautmann*

Chair: *Christoph Schwindt*

1 - Heuristic improvement of microsoft project's resource-allocation capabilities

Norbert Trautmann, Philipp Baumann

2 - Exact methods for resource levelling problems

Jürgen Zimmermann, Thorsten Gather

3 - Temporal scheduling of concurrent engineering projects

Christoph Schwindt, Philipp Benke

4 - Integrated scheduling and staffing it-projects

Rainer Kolisch, Christian Heimerl

■ MA-09

Monday, 9:00-10:20

6.2.53

Challenges of Mathematical Programming by Modern Applications

Chair: *Zuzana Oplatkova*

Chair: *Gerhard-Wilhelm Weber*

1 - An optimization approach for prediction of microbial growth strategies

Pinar Ozturk, Douwe Molenaar

2 - Robust model development for non-linear models

Magderie van der Westhuizen, Giel Hattigh, Hennie Kruger

3 - A bilevel competitive facility location model with competitor's response

Hande Kucukaydin, Necati Aras, I. Kuban Altinel

■ MA-10

Monday, 9:00-10:20

6.2.56

Graphs and Networks I

Chair: *Reinhardt Euler*

1 - On the power of decomposition for the maximum independent set problem

Andreas Brandstädt

2 - Solving efficiently the weighted stable-set problem in claw-free graphs using a reduction operation

Paolo Nobili, Antonio Sassano

3 - Binet graphs and rank 1 closure

Gautam Appa, Konstantinos Papalamprou, Leonidas Pitsoulis

4 - Reconstruction of permutations respect to some generator sets of the symmetric group

Alpar Vajk Kramer

■ MA-11

Monday, 9:00-10:20

8.2.38

Emerging Data Mining Applications in Biomedics and Biotech

Chair: *Honora Smith*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Veronica Biga*

1 - The information effect of the infectious diseases outbreak on biotechnology stock performance

Yi-Hsien Wang, Fu-Ju Yang, Kuang-Hsun Shih, Li-Je Chen

2 - A hybrid classification method: using a support vector machine for rule extraction on diabetes diagnosis

Chien-hsin Yang, Chun-Chin Hsu

3 - Application of artificial neural network and support vector machine to classify the risk of death of hospitalized patients with acute coronary syndrome

Rodrigo Collazo, Basílio Pereira, Laura Bahiense, Amália Faria dos Reis, Amália Faria dos Reis

4 - Prediction in medicine: statistical models versus artificial neural networks

Ana Papoila, Carlos Geraldés, Patricia Xufre

5 - A study in different channels' consumer on the purchasing intention and behavior of bio-technology products

Yuanchau Liour, Chiao-Ling Huang, Chie-bein Chen

■ MA-12

Monday, 9:00-10:20

8.2.39

AHP 01

Chair: *Grzegorz Ginda*

- 1 - Aviation and the belgian climate policy (abc) - a multicriteria analysis (mca) for the evaluation of policy options to mitigate the total aviation climate change impact**

Annalia Bernardini, Tom Van Lier, Annelies Heemeryck, Ellen Van Hoeck, Cathy Macharis

- 2 - An agreement-based approach for generating priority vectors from multiple pairwise comparison matrices**

Mauricio Ruiz-Tagle, Esther Dopazo

- 3 - Integrated mada assessment tool**

Grzegorz Ginda, Mirosław Dytczak

- 4 - A consistency-based method for aggregating preference information from multiple pairwise comparison matrices**

Esther Dopazo, Mauricio Ruiz-Tagle

■ MA-13

Monday, 9:00-10:20

2.2.21

Location and GIS

Chair: *Ioannis Giannikos*

1 - Enhancing location optimization modeling capabilities through the use of GIS

Alan Murray

2 - The geographical information system 'ptolemeos-europe' and the analysis of regional geo-economic dynamics of france

John Karkazis

3 - Improving the efficiency of weee collection systems using a web-based GIS application

Simão Ribeiro, Jorge Pereira, Joel Carvalho, José Oliveira, Manuel Figueiredo, José Telhada, Luis Dias

4 - Multiobjective demand covering models based on GIS

Ioannis Giannikos, Georgios Alexandris

■ MA-14

Monday, 9:00-10:20

2.2.15

Inventories in Supply Chains

Chair: *Horst Tempelmeier*

1 - A discrete time multi-level inventory system with a make-to-order supplier

Horst Tempelmeier

2 - Two-capacitated-supplier two-stage periodic-review supply chain problem investigation

Kai Luo, Laoucine Kerbache, Ramesh Bollapragada

3 - Heuristics for multi-item, two-echelon inventory system with aggregate mean wait time constraint.

Arjun Subramaniam, Deepak Bhatia

4 - Price and perception - understanding the consumer side of recovered products

Jonathan Linton, Leila Hamzaoui

■ MA-15

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2.2.12

Location-routing problems

Chair: *Christian Prins*

1 - Centralized distribution system of infusion solutions on a network of health care units

William Guerrero, Nubia Velasco, Ciro Alberto Amaya, Christelle Gueret, Thomas Yeung

2 - Solution methods for the periodic location-routing problem

Caroline Prodhon

3 - A cutting plane approach for the single truck and trailer routing problem with satellite depots (sttrpsd)

Juan G. Villegas, Jose M. Belenguer, Enrique Benavent, Antonio Martinez Sykora, Christian Prins, Caroline Prodhon

4 - A hybrid GRASP x path relinking for the two-echelon location routing problem

Viet Phuong Nguyen, Christian Prins, Caroline Prodhon

■ MA-16

Monday, 9:00-10:20

2.2.14

Rolling stock and Re-scheduling

Chair: *Markus Reuther*

1 - Rolling stock rotation planning for intercity rail traffic

Markus Reuther

2 - Railway rolling stock rescheduling with rerouting of passengers

Gabor Maroti, Lars Nielsen, Leo Kroon

3 - Rapid transit networks: time table and rolling stock

Ángel Marín, Luis Cadarso

4 - Assignment of services in bus lines under congestion

Esteve Codina, Ángel Marín, Francisco Lopez

■ MA-17

Monday, 9:00-10:20

1.3.14

Collaborative Planning I

Chair: *Herbert Kopfer*

Chair: *Melanie Bloos*

1 - Transportation operations planning and cost allocation in a cooperative scenario

Andrea Nagel, Giselher Pankratz, Hermann Gehring

2 - Allocating cost of service to customers in inventory routing

Okan Ozener, Ozlem Ergun, Martin Savelsbergh

3 - Collaborative vehicle routing in a multi-depot environment

Julia Rieck

4 - The evaluation of pickup and delivery requests in cases of asymmetric information

Melanie Bloos, Herbert Kopfer

■ MA-18

Monday, 9:00-10:20

1.3.15

New Achievements in Stochastic Models and Optimization

Chair: *Erik Kropat*

1 - Inflation derivatives: hjm framework and market models

Kwai-sun Leung, Lixin Wu

2 - On some antagonistic game related to majority voting

Michael Khachay

3 - The effect of correlation in make-to-order systems

Michael Zazanis

4 - Rollover optimization under uncertain regulatory approval date for products with bass demand rate

Hiba El Houry, Christian Van Delft, Laoucine Kerbache

■ MA-19

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1.3.20

Game Theory and Economics

Chair: *Gerhard-Wilhelm Weber*

Chair: *Alberto A. Pinto*

1 - Investments under oligopolistic competition in a vintage differential game

Stefan Wrzaczek, Peter M. Kort

2 - Strategic interaction in macroeconomic policies: an application of differential game theory

Krishna Kumar, Puja Guha

3 - An optimal selection of watchman routes by search game

Shuhei Morita, Ryusuke Hohzaki, Toru Komiya, Emiko Fukuda

■ MA-20

Monday, 9:00-10:20

1.3.33A

Cutting and Packing 1

Chair: *Jose Fernando Oliveira*

1 - Radical-free phi-functions for 2d objects and their applications

Tatiana Romanova, Nikolai Chernov, Yuri Stoyan, A. Pankratov

2 - A constructive algorithm for leather nesting in the automotive industry

Pedro Brás, Cláudio Alves, J. M. Valério de Carvalho, Telmo Pinto

3 - A hybrid meta-heuristic approach for non-standard packing problems with additional conditions

Giorgio Fasano

4 - Dual feasible functions for vector packing problems

Jürgen Rietz, Cláudio Alves, J. M. Valério de Carvalho, François Clautiaux

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6.2.47

OR in Practice I

Chair: *Ana Moura*

1 - Optimizing fire station locations for istanbul metropolitan municipality

Emel Aktas, Ozay Ozaydin, Sule Onsel, Burcin Bozkaya, Fusun Ulengin

2 - Design of a spatially explicit model to optimize the selection of reforestation projects and the sizing of a detention dam to reduce peak runoff in a small watershed

Jochen Breschan, Hans Rudolf Heinemann, Richard Church

3 - A two-stage packing procedure for a Portuguese trading company

Ana Moura, Andreas Bortfeldt

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3.1.10

Teaching OR/MS

Chair: *Susana Colaco*

- 1 - Generalized implementation of program evaluation review technique and critical path method using excel spreadsheet.**

Shruthi S Kumar, Guruprasad Nagaraj

- 2 - On using winqsb software to solve linear programming problems on 11th grade high school classrooms**

Ana Paula Teixeira, Helena Monteiro

- 3 - Some experiences on the design and implementation of operations research courses in web-based environments**

Angel A. Juan, Teresa Oliveira, Maria Martinez, Amilcar Oliveira, Javier Faulin, Sven Trenholm

- 4 - Modeling operations research problems with middle school students**

Susana Colaco, Margarida Pato, Cecilia Rebelo

■ MA-23

Monday, 9:00-10:20

6.2.49

MOO: Algorithms for Multi-Objective Combinatorial Optimization I

Chair: *Luis Paquete*

1 - Finite representation of nondominated sets in multiobjective linear programming

Matthias Ehrgott

2 - Large neighborhood search for solving the multiobjective multidimensional knapsack problem

Thibaut Lust, Jacques Teghem

3 - A polynomial time algorithm for a cardinality constrained multicriteria knapsack problem

Florian Seipp, Luis Paquete, Stefan Ruzika

4 - Three algorithms for finding mines in a line

Luis Paquete, Jochen Gorski, Mathias Jaschob, Kathrin Klamroth

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6.2.50

Bioinformatics I

Chair: *Jacek Blazewicz*

Chair: *Piotr Formanowicz*

1 - A new approach for measuring and visualizing quality of 3d protein models

Piotr Lukasiak, Krzysztof Fidelis, Jacek Blazewicz

2 - Prediction of protein-protein interaction network

Xiang-Sun Zhang

3 - Minimal information for automated protein function prediction

Daniel Faria

4 - A guide through the labyrinth of gene prioritization tools

Francisco Bonachela Capdevila, Léon-Charles Tranchevent, Daniela Nitsch, Bart De Moor, Patrick De Causmaecker, Yves Moreau

■ MA-25

Monday, 9:00-10:20

6.2.48

Financial Mathematics and OR 1

Chair: *Koray Simsek*

1 - Robust portfolio construction for downside risk control

Woo Chang Kim

2 - Stochastic diffusion processes and high frequency sampling data

Ahmet Can Inci

3 - Mathematical programming approaches for generating p-efficient points

Nilay Noyan, Miguel Lejeune

4 - Performance enhancements for defined benefit pension plans

Koray Simsek, John Mulvey

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3.1.11

Mathematical Programming Approaches for Classification Problems

Chair: *Gurkan Ozturk*

- 1 - A new contribution to mean shift outlier model with continuous optimization**

Pakize Taylan, Fatma Yerlikaya Ozkurt, Gerhard-Wilhelm Weber

- 2 - A mixed-integer programming approach to multi-class data classification problems**

Fadime Uney-Yuksektepe, Metin Turkay

- 3 - A heuristic classification algorithm for large scale problems**

Mehmet Tahir Ciftci, Gurkan Ozturk

- 4 - A novel mathematical programming approach for classification based on linear and conic functions**

Gurkan Ozturk, Refail Kasimbeyli

■ MA-27

Monday, 9:00-10:20

8.2.06

Financial Optimization 1

Chair: *Cesarone Francesco*

1 - Log-robust portfolio management

Aurelie Thiele, Ban Kawas

2 - Pension fund alm with multiple asset classes

Katharina Schwaiger, Gautam Mitra, Nicola Spagnolo

3 - Enhanced indexation using ssd

Diana Roman, Gautam Mitra, Csaba I. Fabian

4 - A new portfolio selection approach: models and algorithms

Cesarone Francesco, Andrea Scozzari, Fabio Tardella

■ MA-28

Monday, 9:00-10:20

8.2.10

Stochastic Integer Programming

Chair: *Gloria Perez*

- 1 - **On bfc-msmip strategies for twin node family branching selection and bounding for multistage stochastic mixed integer programming**

Gloria Perez, Laureano Fernando Escudero, María Araceli Garín, María Merino

- 2 - **Frc: a heuristic extension of the branch-and-fix coordination approach for solving very large multistage mixed 0-1 stochastic problems**

Celeste Pizarro Romero, Antonio Alonso-Ayuso, Laureano Fernando Escudero, Pablo Olaso

- 3 - **Subgradient scheme, volume algorithm, progressive hedging algorithm and dynamic constrained cutting plane scheme in langragean decomposition models**

María Araceli Garín, Laureano Fernando Escudero, Gloria Perez, Aitziber Unzueta

- 4 - **Multistage stochastic programming problem: decomposition, stability and empirical estimates**

Vlasta Kaňková

■ MA-29

Monday, 9:00-10:20

8.2.11

General Topics in OR I

Chair: *Tzu-Yin Liang*

1 - Designing control limits of average control chart using subgroups for non-normal processes

Shih-Chou Kao

2 - The layout design of a semiconductor fab with direct-transport guide paths

Ying-Chin Ho, Ta-Wei Liao

3 - Ordering policy for spare preventive replacement

Jih-An Chen

4 - Application of Chinese doctrine of the mean into enterprise leadership

Tzu-Yin Liang, Shan-Yu Su, Shih-Chou Kao

■ MA-30

Monday, 9:00-10:20

8.2.13

MCDA II: Multicriteria ranking and classification vs portfolio decision analysis (Panel)

Chair: *Alec Morton*

1 - Multicriteria ranking and classification vs portfolio decision analysis

Alec Morton, Christian Stummer, Valerie Belton, Ahti Salo, José Rui Figueira, Theodor Stewart

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Monday, 9:00-10:20

8.2.15

Societal Complexity and Climate

Chair: *Gerhard-Wilhelm Weber*

1 - Sustainability assessment for solar plant and wind power projects in the con co island, quang tri province, vietnam

Le Trinh Hai, Pham Hoang Hai, Nguyen Ngoc Khanh, Jan Kuilman, Dinh Thi Phuong Loan, Luc Hens

2 - Online web based solution for environmental sustainable development

Unal Akyuz, Onur Yazici, Okan Kilic, Gizem Akturk, Erkan Mert, Boran Uzunlu, Buse Ozturk, Sureyya Ozogur-Akyuz

3 - Eco-dimension of tourist service quality

Majda Bastic

4 - Compram method for handling societal problems - case study in a Brazilian research and development (r&d) program for the electric sector

André Bacellar, Aurelio Calheiros de Melo Junior

■ MA-32

Monday, 9:00-10:20

8.2.17

Transportation planning in forest products industry

Chair: *Manfred Gronalt*

1 - Combining logs and biomass transportation planning in a Portuguese integrated pulp and paper company

Alexandra Marques, Jose Borges

2 - OR in support of forest products management and supply

Alexandra Marques, Mikael Rönnqvist, Sophie D'Amours, Jose Borges

3 - The impact of using foldable containers in wood transport

Manfred Gronalt, Patrick Hirsch, Jan Zazgornik

4 - Design of a biomass supply chain — an integrated approach

Tiago Gomes, Filipe Alvelos, Sameiro Carvalho

■ MA-33

Monday, 9:00-10:20

8.2.19

Energy Modeling

Chair: *Reinhard Madlener*

1 - A multi-sector energy-economy model for Turkey

Bora Kat, Caglar Güven, Ebru Voyvoda

2 - Sustainable development goals and the use of modern portfolio theory for optimizing the power generation mix at the company level

Barbara Glensk, Reinhard Madlener

3 - A coupled geo-spatial energy - air quality assessment model for the region of luxembourg

Laurent Drouet, Daniel Zachary, Ulrich Leopold, Lara Aleluia Reis

4 - Energy visions, resource allocation and multi-criteria assessment for a stakeholder discourse

Evelina Trutnevyte, Michael Stauffacher, Alexander Scheidegger, Roland W. Scholz

■ MA-34

Monday, 9:00-10:20

8.2.23

Solution Approaches for Lot-sizing Problems I

Chair: *Marco Caserta*

1 - Genetic algorithm based approaches for the capacitated lot sizing problem with set-up carryover and backordering

Hacer Guner Goren, Semra Tunali, Raf Jans

2 - An exact solution approach for the discrete lot-sizing and scheduling problem with identical parallel resources

Céline Gicquel, Laurence Wolsey, Michel Minoux

3 - Lower bounds for the capacitated lot sizing problem with setup time

Silvio Araujo, Zeger Degraeve, Raf Jans

4 - Capacitated lot sizing with setup times: decompositions of the simple plant location formulation

Bert De Reyck, Zeger Degraeve, Ioannis Fragkos

■ MA-35

Monday, 9:00-10:20

6.2.46

Teaching Soft OR and PSMs

Chair: *Leroy White*

Chair: *John Mingers*

1 - Soft systems methodology (ssm): a reconfiguration

Ion Georgiou, Maria Fernanda Mendes

2 - Teaching supporting strategy: a multimethodological perspective using 'soft' and 'hard' tools

Frances O'Brien, Robert Dyson, Martin Kunc

3 - Teaching soft or: role play simulation and social learning

Leroy White

4 - Can problem structuring methods be taught?

Ashley Carreras, Parmjit Kaur

■ MA-36

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3.1.05

Fuzzy expert systems

Chair: *Heinrich Rommelfanger*

1 - Employer awards: fuzzy ratings and rankings

Jessica Naundorf, Thomas Spengler

2 - Dynamics of diffuse information processing: the example of stock price movements

Andreas Uphaus, Bodo Vogt

3 - Operational risk assessment: a fuzzy logic approach

Sebastian Hain, Heinrich Rommelfanger

4 - Optimization of fuzzy models obtained from typicality and membership partitions

Rui Jorge Almeida, Uzay Kaymak

■ MA-37

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3.1.09

OR Applications in the Health Field

Chair: *Habib Chabchoub*

Chair: *Youssef Masmoudi*

1 - Predicting cancer risk group of countries based on oecd health data 2005 - 2007

Idil Erte, Elif Cakir, Pinar Koseoglu, özlem özkan

2 - Breast cancer prognosis based on Bayesian networks

Arij Mkaouar, Hekma Louati, Ahmed Rebai

3 - Emergency department performance measures: multi class queuing networks

Jihen Jlassi

4 - The menu planning problem: a formal study and a practical study

Amine Lamine, Mahdi Khemakhem, Habib Chabchoub

■ MA-38

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6.2.44

Experimental Economics and Game Theory

Chair: *Ulrike Leopold-Wildburger*

Chair: *Gerhard-Wilhelm Weber*

1 - Simulation results of nash-cournot equilibrium

Amnon Gonen, Eyal Brill

2 - Analysis of serbian development indicators and calculation of the competitiveness index

Aleksandra Marcikic, Boris Radovanov

3 - Global division problems with preferences

Miguel A. Hinojosa, Amparo Mármol, Francisca Sanchez

4 - A simulation study of an iterated prisoners' dilemma experiment

Ulrike Leopold-Wildburger, Thomas Burkhardt

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6.2.45

Optimal Control in Economics and Economic Demography

Chair: *Raouf Boucekkine*

1 - Forest management, carbon sequestration and biodiversity in the presence of climate change

Renan Goetz, Natali Hritonenko, Rubén Javier Mur Torrentó, Yuri Yatsenko, Àngels Xabadia

2 - Optimal population problem and endogenous growth: re-assessing the parfit's repugnant conclusion

Giorgio Fabbri, Raouf Boucekkine, David de la Croix

3 - Spatial dynamics and convergence: the spatial ak model

Carmen Camacho, Raouf Boucekkine, Giorgio Fabbri

4 - Happiness due to consumption and its increases, wealth and status

Andreas Novak, Franz Wirl

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Monday, 9:00-10:20

6.2.52

Wireless and sensor networks

Chair: *Bernard Fortz*

1 - Stochastic second order cone programming in mobile ad hoc networks

Francesca Maggioni, Florian Potra, Marida Bertocchi, Elisabetta Allevi

2 - Exact models for the k-connected wireless survivable network problem

Christina Burt, Yao-ban Chan

3 - Sensor network lifetime maximization with mobile sink routing

M. Emre Keskin, I. Kuban Altinel, Necati Aras, Cem Ersoy

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3.1.06

Recent Advances in Revenue Management

Chair: *Joern Meissner*

1 - Decomposition techniques in large-scale network revenue optimization

Arne Karsten Strauss

2 - Expected future value decomposition based bid price generation for large-scale network revenue management

Dolores Romero Morales, Laureano Fernando Escudero, Juan Francisco Monge, Jingbo Wang

3 - A revenue management policy for railway container transportation

Ioana Bilegan, Luce Brotcorne, Dominique Feillet, Yezekael Hayel

4 - Improved bid prices for choice-based network revenue management

Joern Meissner, Arne Karsten Strauss

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3.1.07

Bilevel Programming

Chair: *Stephan Dempe*

1 - An improved exact method for the discrete (r, p)-centroid problem

Yury Kochetov, Ekaterina Alekseeva, Nina Kochetova, Alexander Plyasunov

2 - Interval uncertainty in the context of bilevel fractional programs

Carmen Galé, Herminia I. Calvete

3 - Resolution of bilevel problems using inexact restoration

Ana Friedlander

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Monday, 9:00-10:20

8.2.02

Algorithmic Decision Theory 1

Chair: *Ulrich Junker*

1 - A calibration-based approach to combine experts' prior information

María Jesús Rufo Bazaga, Carlos Javier Pérez Sánchez, Jacinto Martín

2 - Scaling invariance and a characterization of linear objective functions

Sasa Pekec

3 - Invariants of decision problems and impacts onto methods

Alexis Tsoukiàs, Alberto Colomi, Wassila Ouerdane

4 - Effects of hierarchical weighting in preference programming

Jyri Mustajoki

■ MA-44

Monday, 9:00-10:20

8.2.03

Portfolio Decision Analysis I

Chair: *Juuso Liesiö*

Chair: *Ahti Salo*

1 - A promethee.based approach to portfolio selection problems

Rudolf Vetschera, Adiel Teixeira de Almeida

2 - Optimal revision of uncertain estimates in project portfolio selection

Eeva Vilkkumaa, Juuso Liesiö, Ahti Salo

3 - Measurable multiattribute value functions for project portfolio selection and resource allocation

Juuso Liesiö

4 - Comparison of two approaches for evaluating a portfolio of R&D projects with a budget

Anabela Costa, José Paixão

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8.2.12

Dynamic Programming I

Chair: *Lidija Zadnik Stirn*

Chair: *Moshe Sniedovich*

1 - Operational optimization as a part of a bi-level optimization problem

Mikko Linnala

2 - Dynamic programming approach for arrivals scheduling at heathrow airport

Stanislava Armstrong, Jason Atkin, Edmund Burke

3 - Dynamic and group decision-making model for optimal management of natural resources

Lidija Zadnik Stirn

4 - Lot-sizing model with dynamic safety inventories

Jinhua Zheng, Mikio Kubo

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8.2.14

OR Challenges Related to the Recent and Future Disasters I

Chair: *Gerhard-Wilhelm Weber*

1 - A model for high-speed railway planning optimization considering risk analysis and management

Ana Costa, Maria Cunha, Paulo Coelho

2 - Infrastructures in natural disasters

Huey-Kuo Chen

3 - Emergency transportation decisions for the post-disaster istanbul earthquake case

Emin Ahmet Tanrioven, Sibel Salman, Esma Gel

4 - Emergency medical systems: a stochastic generalized assignment case study

Susana Baptista, Rui Oliveira

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8.2.16

Various Aspects of Sustainable Living in Developing Countries

Chair: *Pedamallu Chandra Sekhar*

Chair: *Ali Gökmen*

Chair: *Inci Gokmen*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Canan Pehlivan*

1 - Maximum entropy in land use change - a methodology for an urban sustainability model

Daniel Zachary

2 - Incentives of no-lose targets for developing countries

Vicki Duscha

3 - A location-routing problem for the municipal solid waste management system

Canan Pehlivan, Sedef Meral, Can Ayanoglu

■ MA-48

Monday, 9:00-10:20

8.2.04

Ill-posed Variational Problems I

Chair: *Gerhard-Wilhelm Weber*

- 1 - Proximal auxiliary problem principle with logarithmic-quadratic functions for solving variational inequalities**

Christina Jager

- 2 - The exponent of hölder calmness for level sets of polynomials**

Jan Heerda

- 3 - On the cutting plane property and the bregman proximal point algorithm**

Nils Langenberg

■ MB-01

Monday, 10:40-12h00

Aula Magna

Keynote Talk 2

Chair: *Gerhard J. Woeginger*

1 - The combinatorics of social choice

Noga Alon

■ MB-02

Monday, 10:40-12h00

3.2.14

Advanced Combinatorial Optimization 1

Chair: *Paolo Toth*

1 - On the geometry of lift-and-project

Egon Balas

2 - A new lagrangean based branch and bound algorithm for the 0-1 knapsack problem

Cid de Souza, Alexandre Cunha, Laura Bahiense, Abílio Lucena

3 - Local search inequalities

Paolo Serafini, Giuseppe Lancia, Franca Rinaldi

4 - An exact method for the multi-trip vehicle routing problem

Aristide Mingozzi, Roberto Roberti, Paolo Toth

■ MB-03

Monday, 10:40-12h00

3.2.15

VRP

Chair: *Sandra Ulrich Ngueveu*

1 - A genetic algorithm for capacitated vehicle routing problem

Lai-Soon Lee, Habibeh Nazif, Hsin-Vonn Seow

2 - A novel decoding algorithm to solve vehicle routing problem by particle swarm optimization

Babak Farhang Moghaddam, Seyed jafar Sadjadi, Elham Farhash

3 - A GRASP els metaheuristic for the vehicle routing problem with conflicts

Khaoula Hamdi, Labadi Nacima, Alice Yalaoui

4 - A new graspxels approach to solve vehicle routing problems with back-hauls

Raksmey Phan, Christophe Duhamel, Philippe Lacomme

■ MB-04

Monday, 10:40-12h00

3.2.13

Scheduling with metaheuristics (2)

Chair: *André Rossi*

Chair: *Marcin Siepak*

1 - A scatter search method for uncertain p—cmax problem with interval processing times

Marcin Siepak, Jerzy Jozefczyk

2 - A multi period model for multi-stage multi-product production planning with random yield and compressible processing time

A. Soudi, M.b. Aryanezhad, M. Karimi-Nasab

3 - Lot sizing problem with production compressibility for deteriorating items

A.h. Ebrahimian, M.b. Aryanezhad, Seyed Mohammad Ghoreyshi, M. Karimi-Nasab, E. Noorollahi

4 - A meta-heuristic approach for the design and scheduling of multipurpose batch plants - an exploratory study

Nelson Chibeles-Martins, Tânia Pinto_Varela, Ana Paula Barbósa-Póvoa, Augusto Novais

■ MB-05

Monday, 10:40-12h00

3.2.16

Genetic algorithms

Chair: *Alexander Plyasunov*

Chair: *Hwai-En Tseng*

1 - Grouping genetic algorithms for green product modular design

Hwai-En Tseng

2 - Reliability optimization of series-k-out-of-m systems using a genetic algorithm

Ceki Franko, Cemal Murat Özkut, Cihangir Kan

3 - Genetic local search algorithm for the mill pricing problem

Alexander Plyasunov

4 - A preference based genetic algorithm for bi-objective capacitated facility location problem with partial coverage

Berk Orbay, Esra Karasakal

■ MB-06

Monday, 10:40-12h00

8.2.30

DEA Methodology II

Chair: *Yannis Smirlis*

1 - Piecewise linear virtual inputs/outputs in interval DEA

Yannis Smirlis, Dimitris Despotis

2 - Ranking DMUs by using stochastic maj model

Mohammad Hassan Behzadi, Farhad Hosseinzadeh Lotfi, Mahnaz Mirbolooki

3 - A DEA based approach for solving the multiple objective shortest path problem

Alireza Davoodi

4 - Fractional regression models for second stage DEA efficiency analyses

Esmeralda Ramalho, Joaquim Ramalho, Pedro Henriques

■ MB-07

Monday, 10:40-12h00

8.2.47

New Achievement in Mathematical Programming

Chair: *Gerhard-Wilhelm Weber*

Chair: *Domingos Cardoso*

1 - Algorithmic strategies for the recognition of graphs with convex quadratic stability number

Maria F Pacheco, Domingos Cardoso, Carlos J. Luz

2 - A new hybrid cryptosystem based on the satisfiability problem

Sadek Bouroubi

3 - A two-phase heuristic for the k clusters with fixed cardinality problem

Lídia Lourenço, Margarida Pato, Graça Gonçalves

4 - A combinatorial approach to assess the separability of clusters

M. Joao Martins, J. Orestes Cerdeira, Pedro C. Silva

■ MB-08

Monday, 10:40-12h00

6.1.36

Scheduling at Container Terminals

Chair: *Florian Jaehn*

1 - Positioning freight trains in rail container terminals

Malte Fliedner, Nils Boysen

2 - Parking freight trans in rail-rail transshipment yards: the train location problem

Nils Boysen, Malte Fliedner

3 - Truck scheduling problem in intermodal container transportation

Jenny Nossack, Erwin Pesch

4 - New bounds and algorithms for the transshipment yard scheduling problem

Florian Jaehn, Nils Boysen, Erwin Pesch

■ MB-09

Monday, 10:40-12h00

6.2.53

Optimization of Transport Problems on Networks I

Chair: *Simone Göttlich*

1 - A measure theoretic approach to continuous and discrete flows over time

Ebrahim Nasrabadi, Ronald Koch, Martin Skutella

2 - An adaptive model switching and discretization algorithm for gas flow on networks

Pia Domschke, Oliver Kolb, Jens Lang

3 - Approximate parametric dynamic programming in inventory management

Marco Laumanns, Stefan Woerner, Apostolos Fertis, Rico Zenklusen

4 - Solution techniques for time-continuous network problems

Simone Göttlich

■ MB-10

Monday, 10:40-12h00

6.2.56

Graphs and Networks II

Chair: *Jean Fonlupt*

1 - The sandwich line graph

Denis Cornaz

2 - Computing solutions of the paintshop-necklace problem

Frédéric Meunier

3 - Non-stable pairs in the stable marriage problem and multi-index configurations

Pavlos Eirinakis, Dimitris Magos, Yiannis Mourtos, Panayiotis Miliotis

■ MB-11

Monday, 10:40-12h00

8.2.38

Technical Communication

Chair: *Stig C Holmberg*

Chair: *Lena-Maria Öberg*

1 - Viable learning organizations — continuous change in a changeable world

Lena-Maria Öberg, Christina Nyström, Hanna Olsson

2 - Xmi-thinking for technical communication

Stig C Holmberg, Lena-Maria Öberg

3 - Queueing modeling and analysis for a web-server system with proxy servers

Yoshitaka Takahashi, Yoshiaki Shikata, Andreas Frey

4 - Churn analysis with Bayesian belief network in telecommunication industry

Y. Ilker Topcu, P?nar Aykanat

■ MB-12

Monday, 10:40-12h00

8.2.39

AHP 02

Chair: *Erdem Aksakal*

- 1 - Evaluations of vessel registration alternatives after the direct shipping across taiwan strait applying fuzzy AHP**

Cheng-Chi Chung, Shih-Hao Yang

- 2 - A hybrid approach to personnel selection problem: AHP and weighted fuzzy axiomatic design**

Erdem Aksakal, Metin Dagdeviren, Ergun Eraslan

- 3 - A hybrid fuzzy approach for a point-factor job evaluation system**

Ahmet Can Kutlu, Hülya Behret

- 4 - Selecting the software that will be developed for the purchasing department using fuzzy AHP**

Nurgül Demirta?, Özge Nalan Alp, Hayri Baraçlı?

■ MB-13

Monday, 10:40-12h00

2.2.21

Facility Location and Supply Chain Management

Chair: *Isabel Correia*

1 - Robust models for dynamic multilevel facility location

Marina Gebhard, Jens Wollenweber

2 - Optimal development of a national supply system in Germany and its geo-economic impact on the states and regions of it

John Karkazis, Vassilis Angelis, Christina Chalimourda, Maria Mavri

3 - A heuristic to locate distribution centers in large supply chains

Jean-Sébastien Tancrez, Jean-Charles Lange, Pierre Semal

4 - A two-echelon supply chain network design problem with facility sizing decisions and variable operating costs

Francisco Saldanha-da-Gama, Isabel Correia, Teresa Melo

■ MB-14

Monday, 10:40-12h00

2.2.15

Lotsizing and Supply Chain Planning

Chair: *Herbert Meyr*

- 1 - Simultaneous lotsizing and scheduling for time-dependent production speeds: dual reoptimization revisited**

Herbert Meyr

- 2 - Heuristics for the general lotsizing and scheduling problem for multiple production stages**

Florian Seeanner

- 3 - Supply chain planning in grocery retail - an operations planning framework**

Michael Sternbeck, Alexander Hübner, Heinrich Kuhn

- 4 - A hierarchical planning approach to physical and financial supply chain management**

Gerd J. Hahn, Heinrich Kuhn

■ MB-15

Monday, 10:40-12h00

2.2.12

Rich routing problems

Chair: *David Pisinger*

1 - Reliability in vehicle routing problem with time windows

Duygu Tas, Nico Dellaert, Tom Van Woensel, Ton de Kok

2 - Dynamic routing in congested networks using real-time its information

Ratna Babu Chinnam, Ali Guner, Alper Murat

3 - Driver-pooling for vehicle routing problems

Christian Doppstadt, Michael Schwind, Michael Schneider

4 - Order batching and routing with time windows in warehouse picking

Katja Prnaver, David Pisinger

■ MB-16

Monday, 10:40-12h00

2.2.14

Robust optimization in public transport

Chair: *Laura Galli*

1 - Robust aircraft rotation planning

Ivan Dovica, Ralf Borndörfer, Ivo Nowak, Thomas Schickinger

2 - A lagrangian heuristic for robust train timetabling

Valentina Cacchiani, Alberto Caprara, Matteo Fischetti

3 - Recoverable robustness for railway rolling stock planning

Laura Galli, Valentina Cacchiani, Alberto Caprara, Leo Kroon, Gabor Maroti, Paolo Toth

4 - Robust train platforming and routing

Gabor Maroti, Alberto Caprara, Laura Galli, Leo Kroon, Paolo Toth

■ MB-17

Monday, 10:40-12h00

1.3.14

Collaborative Planning II

Chair: *Karl-Heinz Küfer*

Chair: *Herbert Kopfer*

1 - Limit and degree of autonomy in groupage systems

Herbert Kopfer, Heiko Kopfer, Xin Wang

2 - A collaboration platform for freight carriers

Heiner Ackermann, Hendrik Ewe, Herbert Kopfer, Karl-Heinz Küfer

3 - Profit sharing among collaborating freight carriers

Hendrik Ewe, Heiner Ackermann, Herbert Kopfer, Karl-Heinz Küfer

4 - A combinatorial auction framework and models for carriers' collaboration in less than truckload transportation

Chen Haoxun, Bo Dai

■ MB-18

Monday, 10:40-12h00

1.3.15

Stochastic Modeling and Simulation I

Chair: *Alexander Grusho*

1 - Fractal dimension cluster validation criteria

Dvora Toledano-Kitai, Renata Avros, Zeev Barzily, Zeev (Vladimir) Volkovich

2 - On goodness-of-fit tests for random combinatorial objects

Alexander. Kolodzey

3 - Learning parameter optimization of stochastic gradient descent with momentum for a stochastic quadratic

Memmedaga Memmedli, Engin Tas

4 - Identification of local distortions in random sequences

Alexander Grusho, Elena Timonina, Zeev (Vladimir) Volkovich

■ MB-19

Monday, 10:40-12h00

1.3.20

Modelling the Human Decisions

Chair: *Helena Ferreira*

Chair: *Abdelrahim Mousa*

1 - Collaborative dominance: when doing unto others as you would have them do unto you is rational

Leandro Rego, Filipe Souza

2 - Modeling human behavior

Helena Ferreira, Leandro Almeida, José Cruz, Alberto A. Pinto

3 - Pinto's individuals decision bussola

Abdelrahim Mousa, Alberto A. Pinto, Mohammad Mousa, Rasha Samarah

4 - Delayed effects of fiscal policy measures

Orlando Gomes, Ana Marques

■ MB-20

Monday, 10:40-12h00

1.3.33A

Cutting and Packing 2

Chair: *Andreas Bortfeldt*

1 - Ordering rules of the set of pieces in 2d- open orthogonal dimensional problem

Garcia Perez, Joaquin Aranda Almansa, Miguel Delgado Pineda

2 - Rect-topos: a constructive heuristic for the rectangle packing area minimization problem

A. Miguel Gomes, Marisa Oliveira, M^a Eduarda Pinto Ferreira

3 - A superior piecewise linearization approach for assortment problems

Pei-Chun Wang

4 - A two-stage approach for the rectangle packing area minimization problem

Andreas Bortfeldt, Götz Goldacker

■ MB-21

Monday, 10:40-12h00

6.2.47

OR in Practice II

Chair: *Bernard Lamond*

1 - Mes developing practice in tobacco manufacturing: a case study

Zhong Yao

2 - Comparing the metaheuristics and gradient based approaches in multi-objective urban water management

Mahdi Zarghami, Hassan Hajykazemian, Vahid Eghbaal

3 - Dynamic control of a flexible machine with stochastic tool life

Bernard Lamond

■ MB-22

Monday, 10:40-12h00

3.1.10

Teaching with cases

Chair: *Peter Bell*

1 - Workshop on teaching OR using cases i

Peter Bell, Fredrik Odegaard, Mehmet Begen

2 - Workshop on teaching OR using cases ii

Fredrik Odegaard, Mehmet Begen, Peter Bell

3 - Workshop on teaching OR using cases iii

Mehmet Begen, Peter Bell, Fredrik Odegaard

4 - Workshop on teaching OR using cases iv

Antonia Carravilla

■ MB-23

Monday, 10:40-12h00

6.2.49

MOO: Algorithms for Multi-Objective Combinatorial Optimization II

Chair: *José Santos*

1 - Empirical study for the multi-objective shortest path problems using real data instances

José Santos, José Paixão

2 - Dynamic location-allocation facility modeling using a gis-based multiobjective approach

Lino Tralhão, João Coutinho-Rodrigues, José Paulo Almeida, Luís Alçada

3 - Automated schematic maps: point positioning enhancement strategies

João Mourinho, Teresa Galvão Dias, João Cunha

4 - A multi-objective approach for high quality virtual backbones in mobile ad-hoc networks

Pascal Bouvry, Apivadee Piyatumrong, Frederic Guinand, Kittichai Lavangnananda

■ MB-24

Monday, 10:40-12h00

6.2.50

Bioinformatics II

Chair: *Jacek Blazewicz*

Chair: *Piotr Lukasiak*

1 - Insights into protein-rna complex modeling on example of dicer-like proteins.

Maciej Milostan, Piotr Lukasiak, Jacek Blazewicz

2 - Generation of enriched gene sets from independent component analysis sources: an alternative for the identification of biologically relevant molecular signatures

Adrien Six, Hang Phuong Pham, Nicolas Dérian, David Klatzmann

3 - Assessment of protein structure models by systematic evaluation of local sequence-structure compatibility

Krzysztof Fidelis, Piotr Lukasiak, Maciej Antczak, Wojciech Biniński

4 - Combinatorial optimization to predict protein structure, function and evolutionary relationships

Susanne Pape, Alexander Martin, Sebastian Pokutta

■ MB-25

Monday, 10:40-12h00

6.2.48

Financial Modelling and Risk Management

Chair: *Omer Onalan*

1 - A multivariate approach to risk-return management within financial crisis environment

Marie Theres Gregus, Elza Jurun

2 - Hedging uncertainty in software development — a real option modeling approach

Emil Numminen

3 - Pricing of foreign exchange options under the heston stochastic volatility model and the cir interest rates

Rehez Ahlip

■ MB-26

Monday, 10:40-12h00

3.1.11

Bioinformatics Applications of Machine Learning

Chair: *Burcu Gungor*

Chair: *Fadime Uney-Yuksektepe*

1 - Application of advanced machine learning methods for tag snp selection in complex disease association studies

Gürkan Üstüinkar, Sureyya Ozogur-Akyuz, Gerhard-Wilhelm Weber, Nazife Baykal

2 - Bioinformatics approaches to associate single nucleotide polymorphisms with human complex diseases according to their pathway related context

Burcu Gungor, Ceyda Sol, Ugur Sezerman

3 - Bio-inspired communications and networking: research challenges and future research directions

Vehbi Cagri Gungor

■ MB-27

Monday, 10:40-12h00

8.2.06

Financial Optimization 2

Chair: *Roman Muraviev*

1 - Optimal control of financial derivatives by chaotic dynamics

Giacomo Patrizi, Laura Di Giacomo

2 - Dynamic management of multiple real options

Michi Nishihara

3 - Utility maximization with additive habits: optimal consumption and wealth

Roman Muraviev

■ MB-28

Monday, 10:40-12h00

8.2.10

Applications of stochastic programming to the energy sector - electricity

Chair: *Maria Teresa Vespucci*

1 - A multi-stage stochastic electricity portfolio model with forward contracts

Rosella Giacometti, Maria Teresa Vespucci, Marida Bertocchi

2 - Measures of performance of a stochastic model for the daily coordination of wind power plants and pumped storage hydro plants.

Maria Teresa Vespucci, Asgeir Tomasgard, Marida Bertocchi, Mario Innorta

3 - Optimal day-ahead bidding strategy with futures and bilateral contracts. scenario generation through factor models.

Cristina Corchero, F.-Javier Heredia, M. Pilar Muñoz

4 - Single and multi-settlement approaches to market clearing mechanisms under demand uncertainty

Javad Khazaei, David Young, Golbon Zakeri

■ MB-29

Monday, 10:40-12h00

8.2.11

Global Optimization of Graph Partitioning

Chair: *Frauke Liers*

1 - An effective exact algorithm for k-way graph partitioning

Frauke Liers, Miguel Anjos, Bissan Ghaddar, Angelika Wiegele

2 - Solving non-convex binary quadratic problems via second-order cone programming

Bissan Ghaddar, Miguel Anjos, Juan C. Vera

3 - Integer linear graph partitioning

Matthias Peinhardt

4 - On handling cutting planes in interior-point methods for solving semidefinite relaxations of binary quadratic optimization problems

Alexander Engau, Miguel Anjos, Anthony Vannelli

■ MB-30

Monday, 10:40-12h00

8.2.13

MCDA II: Health

Chair: *Alec Morton*

Chair: *Mara Airoidi*

1 - Multiple treatment multi-criteria drug benefit-risk assessment

Gert van Valkenhoef, Bert de Brock, Hans Hillege, Douwe Postmus, Tommi Tervonen, Tommi Tervonen

2 - International perspectives on priority setting in health care using multi-criteria decision analysis (mcda)

Stuart Peacock

3 - Design of appointment systems for outpatient clinics with scheduled and unscheduled arrivals

Maartje Zonderland, Nikky Kortbeek, Richard Boucherie, Nelly Litvak

■ MB-31

Monday, 10:40-12h00

8.2.15

Societal Complexity, City and Economy

Chair: *Cathal Brugha*

1 - The identity of a city

Zbigniew Kesek

2 - A multivariate study of social change in canterbury

Aijie Xie, Cecilio Mar Molinero

3 - Why bubble economy occur and bubble economy destroy

Eizo Kinoshita

4 - The actors of the credit crisis reflected by the compram methodology

Dorien DeTombe

■ MB-32

Monday, 10:40-12h00

8.2.17

OR in Forestry I

Chair: *Andrés Weintraub*

1 - Optimal weights in route distance generation

Mikael Rönnqvist, Patrik Flisberg, Bertil Lidén

2 - Dynamic log yard designs for an improved coordination of sawmill and log yard operations

Luc LeBel, Daniel Beaudoin

3 - A solution of the cable corridor layout problem for harvesting under steep slope conditions

Leo Bont, Hans Rudolf Heinemann, Richard Church

4 - Mixed integer programming models to evaluate integrating strategies for value chain management: a case study of the Chilean forest industry

Andrés Weintraub, Juan José Troncoso, Sophie D'Amours, Mikael Rönnqvist

■ MB-33

Monday, 10:40-12h00

8.2.19

Energy Policy and Planning

Chair: *Sandrina Pereira*

1 - Decision support system for low carbon regions

Sandrina Pereira, Anildo Costa

2 - Energy indicators for sustainable development

Athanasios Angelis-Dimakis, George Arampatzis

3 - An n-k contingency-constrained unit commitment model via robust optimization

Fabício Oliveira, Alexandre Street, José Manuel Arroyo

■ MB-34

Monday, 10:40-12h00

8.2.23

Solution Approaches for Lot-sizing Problems II

Chair: *Bernardo Almada-Lobo*

1 - An efficient computational method for non-stationary (r,s) inventory policy with service level constraints

Mustafa Dogru, Armagan Tarim, Ulas Ozen, Roberto Rossi

2 - Multi-product single-stage lot sizing with random yield, imperfect inspection, process compressibility, and partial backordering

D. Moradinezhad, M.b. Aryanezhad, E. Noorollahi, M. Karimi-Nasab, Seyed Mohammad Ghoreyshi

3 - Heuristic approaches for a practical lot splitting and scheduling problem

Carina Pimentel, Filipe Alvelos, António Duarte, J. M. Valério de Carvalho

4 - Multi-plant, multi-period and multi-item capacitated lotsizing problem in beverage industry

Luis Guimarães, Bernardo Almada-Lobo

■ MB-35

Monday, 10:40-12h00

6.2.46

Soft OR and Problem Structuring Methods I

Chair: *Colin Eden*

1 - Enabling politically feasible agreements: what is a group?

Colin Eden, Paul Nutt, Fran Ackermann

2 - Problem structuring for investing in an uncertain future

Colin Eden

3 - Using the theory of constraints to resolve conflicts in a large public hospital

Vicky Mabin, Sally Babington, Vanessa Caldwell, Julie Yee

4 - Systematic and comprehensive supply chain environmental management

Joana M. Comas Marti, Ralf W. Seifert

■ MB-36

Monday, 10:40-12h00

3.1.05

Fuzzy Goal Programming 1

Chair: *Mariano Jimenez-Lopez*

1 - A fuzzy multi-objective approach for master planning in ceramic tile supply chains

Josefa Mula, David Peidro, Mareva Alemany, Francisco Lario Esteban

2 - An application of goal programming in personnel selection decisions

Lourdes Canos, Maria J. Canos, Vicente Liern

3 - Weight and parameter space exploration in fuzzy goal programming

Dylan Jones

4 - Ordinary goal programming with fuzzy aspiration levels

Mariano Jimenez-Lopez

■ MB-37

Monday, 10:40-12h00

3.1.09

Humanitarian Logistics

Chair: *Begoña Vitoriano*

1 - Rule-based assessment of disaster's consequences in a bipolar possibilistic framework

J. Tinguaro Rodriguez, Javier Montero, Begoña Vitoriano

2 - Measuring risk factors in humanitarian aid distribution

Begoña Vitoriano, M. Teresa Ortuno, Gregorio Tirado

3 - Combining distribution and recovery operations in humanitarian logistics

Federico Liberatore, Begoña Vitoriano, M. Teresa Ortuno, Gregorio Tirado, Maria Paola Scaparra

4 - Infrastructure and good governance as key elements to equity and economic growth in sub Saharan africa

Moses Dowart

■ MB-38

Monday, 10:40-12h00

6.2.44

Advances in Economical and Financial Theory

Chair: *Ulrike Leopold-Wildburger*

Chair: *Gerhard-Wilhelm Weber*

1 - The visual exploration and grouping of EU member states according to structural indicators: a data-driven approach

Jasna Soldic-Aleksic

2 - The correlation risk premium in the recent financial turmoil

Chrysi Markopoulou, Spyros Xanthopoulos, Apostolos Refenes

3 - The definition of customer churn in a non-contractual setting

Susana San Matias, Mónica Clemente

■ MB-39

Monday, 10:40-12h00

6.2.45

Set-Valued Analysis for Control Problems

Chair: *Robert Baier*

1 - Discrete approximation of differential systems with variable time impulses

Robert Baier, Tzanko Donchev

2 - Collision avoidance using reachable sets

Matthias Gerds

3 - Semiconcavity of the value function for a class of differential inclusions

Peter Wolenski

4 - Operations on sets and approximation of set-valued mappings

Elza Farkhi

■ MB-40

Monday, 10:40-12h00

6.2.52

Network design 1

Chair: *Luis Gouveia*

1 - The generalized regenerator location problem

Ivana Ljubic, Si Chen, S. Raghavan

2 - Benders decomposition for the hop-constrained survivable network design problem

Quentin Botton, Bernard Fortz, Luis Gouveia, Michael Poss

3 - Combining column generation and local search heuristics for the load balancing optimization of telecommunication networks

Dorabella Santos, Amaro de Sousa, Filipe Alvelos

4 - A branch-and-cut algorithm for the partitioning-hub location-routing problem

Daniele Catanzaro, Martine Labbé, Aykut Ozsoy

■ MB-41

Monday, 10:40-12h00

3.1.06

Behavioral Models in Revenue Management

Chair: *Tatsiana Levina*

Chair: *Yuri Levin*

1 - Strategic bidders club: implications for consumer learning

Tatsiana Levina, Yuri Levin, Jeff McGill, Mikhail Nediak

2 - Optimal keyword bidding to allocate expenditures across keywords: a stochastic optimization analysis

Ozgur Ozluk, Susan Cholette, Mahmut Parlar

3 - Empirical investigation of strategic buyer and seller behavior in the wait-or-buy game

Anton Ovchinnikov

4 - Selling to heterogeneous customers with uncertain valuations under returns policies

Qian Liu, Wenqiang Xiao

■ MB-42

Monday, 10:40-12h00

3.1.07

Mathematical Programs with Complementarity Constraints

Chair: *Joaquim Judice*

1 - Strong stability in mpcc

Vladimir Shikhman, Hubertus Th. Jongen, Jan-J. Rückmann, Sonja Veelken

2 - On the formulation and solution of a traffic linear program with complementarity constraint

Isabel Ribeiro, Maria Lurdes Simões

3 - The asymmetric eigenvalue complementarity problem: theory and algorithms

Joaquim Judice, Silvério Rosa

4 - Dynamics of equilibrium problems: a hybrid systems approach

Monica-Gabriela Cojocaru

■ MB-43

Monday, 10:40-12h00

8.2.02

Algorithmic Decision Theory 2

Chair: *Alexis Tsoukiàs*

1 - Constructing indexes: poverty measurement

Alexis Tsoukiàs, Vivien Kana

2 - The quality of life in milano: a rating analysis

Alberto Colorni, Alessandro Luè

3 - The value of interconnecting water sources: a real option approach

Chiara D'Alpaos

4 - Comparison of alternative approaches for calculation of human development indices

Veronika Skocdopolova, Josef Jablonsky

■ MB-44

Monday, 10:40-12h00

8.2.03

Portfolio Decision Analysis II

Chair: *Nikolaos Argyris*

Chair: *Alec Morton*

1 - Cut and cute: a new multicriteria approach for non-additive concavifiable preferences

Nikolaos Argyris, José Rui Figueira, Alec Morton

2 - Using interactive heatmaps and parallel coordinate plots to support multi-criteria portfolio selections

Christian Stummer, Elmar Kiesling, Johannes Gettinger, Rudolf Vetschera

3 - Using linear and non-linear programming methods for recommendation in multicriteria sorting problems

Philippe Nemery, Alessio Ishizaka, Dylan Jones

4 - Portfolio project management using ahp: a case study

Amanda Silva, Mischel Carmen N. Belderrain, Ademilton Santos, Eduardo Inoue, Milton Chagas Júnior

■ MB-45

Monday, 10:40-12h00

8.2.12

Dynamic Programming II

Chair: *Lidija Zadnik Stirn*

- 1 - **A sequential decision problem with partial maintenance on partially observable Markov process**

Toru Nakai

- 2 - **Solving the top-percentile traffic routing problem by approximate dynamic programming**

Xinan Yang, Andreas Grothey

- 3 - **Single-leg airline revenue management with overbooking and cancellations**

Nursen Aydin, S. Ilker Birbil, J.b.g. Frenk, Nilay Noyan

- 4 - **Linear time exact algorithm for capacitor placement on radial distribution feeders**

Christiano Lyra, José Federico Vizcaino, Fábio Usberti

■ MB-46

Monday, 10:40-12h00

8.2.14

OR Challenges Related to the Recent and Future Disasters II

Chair: *Gerhard-Wilhelm Weber*

1 - Coupling of dynamic network flows and a cellular automaton for evacuation modeling

Markus Thiemann, Stefan Ruzika, Horst W. Hamacher

2 - How to very quickly solve a staffing and dispatching problem for fire and rescue services

Tobias Andersson Granberg

3 - Logistics for decision support in case of natural disasters in developing countries

Christian Tesch

4 - Multi-class open queueing network with non-preemptive priority discipline

Seongmoon Kim

■ MB-47

Monday, 10:40-12h00

8.2.16

General Topics in OR II

Chair: *Bjoern Anton*

- 1 - The influence of self-attribution bias on managerial incentives and the choice of performance measures**

Bjoern Anton

- 2 - Improving the quality of plastic injection molding using Taguchi method and pca**

Fong Jung Yu, Chingpou Chang, Kai-I Huang

- 3 - Visualization and representation of temporal knowledge**

Jiang-Liang Hou, Shih-Ting Yang, Wei-Ning Pi, Yuh-Liang Chen

- 4 - Multiple sourcing strategies: trade-off between cost-oriented and flexibility-oriented supplier**

Yuan-Du Hsiao, Fan-Yun Pai, Tsu-Ming Yeh

■ MB-48

Monday, 10:40-12h00

8.2.04

Ill-posed Variational Problems II

Chair: *Gerhard-Wilhelm Weber*

- 1 - Improving a hybrid preconditioner for solving large-scale normal equations systems arising from interior point methods**

Aurelio Oliveira, Marta Velazco

- 2 - On some properties and numerical methods for problems of topology optimization**

Wolfgang Aichtziger

■ MC-01

Monday, 12:20-13:40

Aula Magna

Keynote Talk 3

Chair: *Marielle Christiansen*

1 - Operations research for green logistics

Rommert Dekker

■ MC-02

Monday, 12:20-13:40

3.2.14

Applications of Combinatorial Optimization

Chair: *Nelson Maculan Filho*

Chair: *Carlile Lavor*

1 - Discretization of the molecular distance geometry problem by defining artificial orderings on the molecule

Antonio Mucherino, Carlile Lavor, Leo Liberti, Nelson Maculan Filho, Tiberius Bonates, Gabriel Paillard

2 - Heuristic method for the multi-choice multidimensional knapsack problem

Raid Mansi, Cláudio Alves, J. M. Valério de Carvalho, Saïd Hanafi

3 - The maximum k-balanced subgraph of a signed graph

Rosa Maria Figueiredo, Daniele Catanzaro, Martine Labbé

4 - The coherence problem - polynomially solvable cases

Gilberto Calvillo, David Romero

■ MC-03

Monday, 12:20-13:40

3.2.15

Metaheuristics for the VRPTW

Chair: *Caroline Prodhon*

Chair: *Philippe Lacomme*

1 - Heuristic methods for the vehicle routing problem with time windows and split deliveries

Reghioui Mohamed, Christian Prins, Abdellah El Fallahi

2 - Granular variable neighborhood search for the team orienteering problem with time windows

Jan Melechovsky, Labadi Nacima, Renata Mansini, Roberto Wolfler-Calvo

3 - Variable neighborhood search for the time-dependent vehicle routing problems with time windows

Stefanie Kritzinger, Karl Doerner, Richard Hartl, Fabien Tricoire

4 - Vehicle routing problem with time windows using soma

Ivan Brezina, Juraj Pekár, Zuzana Cicková

■ MC-04

Monday, 12:20-13:40

3.2.13

Parallel machine scheduling with metaheuristics

Chair: *André Rossi*

- 1 - A literature review for the simulated annealing method with the implementation on the parallel machines since 2000**

Pelin Alcan, Huseyin Basligil

- 2 - Scheduling independent jobs on identical parallel machines: an effective approach**

Francesca Vocaturo, Giuseppe Paletta

- 3 - Speeding up a rollout algorithm for complex parallel machine scheduling**

Marco Pranzo, Michele Ciavotta, Carlo Meloni

■ MC-05

Monday, 12:20-13:40

3.2.16

Multi-objective metaheuristics

Chair: *Walter Habenicht*

Chair: *Lionel Amodeo*

1 - Pareto-search in discrete vector optimization problems.

Walter Habenicht

2 - Multiobjective optimization using the lorenz dominance for a buffers sizing problem

Hicham Chehade, Lionel Amodeo, Farouk Yalaoui

3 - Comparison of multiobjective cooperative and classical evolutionary algorithms for global supply chain optimisation.

Maksud Ibrahimov, Neal Wagner, Sven Schellenberg, Arvind Mohais, Zbigniew Michalewicz

■ MC-06

Monday, 12:20-13:40

8.2.30

DEA Methodology III

Chair: *Wade Cook*

1 - Multiple variable proportionality in data envelopment analysis

Wade Cook, Joe Zhu

2 - Technical efficiency based on cost gradient measure

Miki Tsutsui, Kaoru Tone, Yuichiro Yoshida

3 - Centralised DEA model for target setting when articulation of partial ideal targets are considered

Gabriel Villa, Sebastián Lozano, David Canca

4 - On the choice of weights profiles in cross-efficiency evaluations

Nuria Ramón, Inmaculada Sirvent, Jose L. Ruiz

■ MC-07

Monday, 12:20-13:40

8.2.47

Recent Advances in the Use of Mathematical Programming

Chair: *Gerhard-Wilhelm Weber*

Chair: *Kaisa Miettinen*

Chair: *Jussi Hakanen*

1 - The last buy decision in situations with an alternative item

Simme Douwe Flapper

2 - Corporate investment choice and exchange option between production functions

Jean-luc Prigent, Olfa Bouasker

■ MC-08

Monday, 12:20-13:40

6.1.36

Airside Airport Operations

Chair: *Jason Atkin*

Chair: *Chris Potts*

1 - Realistic runway scheduling problems

Jason Atkin, Edmund Burke

2 - Models and algorithms for scheduling aircraft landings

Chris Potts, Julia Bennell, Mohammad Mesgarpour

3 - Comparison of airport ground movement algorithms

Stefan Ravizza, Jason Atkin, Edmund Burke

4 - A comparison of constructive algorithms for baggage sorting station allocation

Amadeo Ascó, Jason Atkin, Edmund Burke

■ MC-09

Monday, 12:20-13:40

6.2.53

Complementarity Problems, Variational Inequalities and Equilibrium

Chair: *Sandor Zoltan Nemeth*

Chair: *Florian Potra*

1 - Weighted complementarity problems: theory and applications.

Florian Potra

2 - Consistent conjectures in mixed oligopoly

Vyacheslav Kalashnikov, Vladimir Bulavsky, Nataliya Kalashnykova

3 - Properties of schur complements in Euclidean Jordan algebras

Roman Sznajder

4 - Iterative methods for nonlinear complementarity problems on isotone projection cones

Sandor Zoltan Nemeth

■ MC-10

Monday, 12:20-13:40

6.2.56

Graphs and Applications

Chair: *Bernard Ries*

1 - Fractionally co-strongly perfect claw-free graphs with an application to wireless networking

Yori Zwols

2 - Coloring vertices of triangle-free graphs

Bernard Ries

3 - Computing identifying codes in chosen graph classes and dynamic scenarios

Adrian Kosowski

■ MC-11

Monday, 12:20-13:40

8.2.38

Energy Market Modeling

Chair: *Steven Gabriel*

1 - Analysis of a possible natural gas cartel

Steven Gabriel, Knut Rosendahl

2 - Using real options to evaluate optimal funding strategies for carbon capture and storage (ccs) projects in the European union

Jeremy Eckhause, Johannes Herold

3 - A model for oligopolistic natural gas markets

Ibrahim Abada, Steven Gabriel, Olivier Massol, Vincent Briat

4 - Cartelisation in the natural gas market: the stability issue

Olivier Massol, Stéphane Tchong-Ming

■ MC-12

Monday, 12:20-13:40

8.2.39

AHP 03

Chair: *Anabela Pereira Tereso*

1 - Multicriteria decision aid: evaluation and comparison of the main tools

Anabela Pereira Tereso, Cristina Seixedo

2 - Environmental risk assessment for roadway transportation of Ing

Emel Topuz, Ilhan Talinli, Atakan Oztekin

3 - Designing a prioritization model for investment plans under uncertainty using interval comparison matrices

Seyed Hesameddin Anvar, Masoud Narenji, Mohammad Fathian

4 - A two phased multi criteria approach for aviation accident analysis

Ahmet Kandakoglu, Erol Yucel, Y. Ilker Topcu

■ MC-13

Monday, 12:20-13:40

2.2.21

Managing disruptions in facility location models

Chair: *Maria Paola Scaparra*

1 - Node fails, facility fails: facility location problem for emergency evacuation

Rongbing Huang, Mozart Menezes, Seokjin Kim

2 - Incorporating recovery time issues in facility protection planning

Chaya Losada, Maria Paola Scaparra

3 - A bilevel fixed charge location-protection model for facilities under imminent attack

Deniz Aksen, Necati Aras, Nuray Piyade

4 - An integer programming formulation for the non-uniform p-median problem with unreliable facilities

Maria Paola Scaparra, Jesse O'Hanley, Sergio García Quiles

■ MC-14

Monday, 12:20-13:40

2.2.15

Price and Capacity Planning in Supply Chains

Chair: *Esma Gel*

1 - Dynamic price and lead time quotation for make-to-order systems with contract customers and spot purchasers

Esma Gel, Ahmet Hafizoglu, Pinar Keskinocak

2 - An approach to robust capacity allocation in supply chains

Thomas Makuschewitz, Bernd Scholz-Reiter, Fabian Wirth, Michael Schönlein

3 - A comparative study of near-optimal and flexible strategic remanufacturing capacity planning policies in clscs

Efstratios Athanasiou, Patroklos Georgiadis

4 - Supply chain management: planning decisions and economical performance criteria

Ana Cristina Santos Amaro, Ana Paula Barbósa-Póvoa

■ MC-15

Monday, 12:20-13:40

2.2.12

Green Vehicle Routing Problems

Chair: *Tolga Bektas*

1 - Analysis of travel times and CO2 emissions in time-dependent vehicle routing

Ola Jabali, Tom Van Woensel, Ton de Kok

2 - Fuel emission optimization in vehicle routing problems with time-varying speeds

Jiani Qian, Richard Eglese

3 - An analytical approach to medical waste management in istanbul

Tülin Aktin, Ilayda Karabulut, Suzan Yavuztürk

4 - The pollution-routing problem

Tolga Bektas, Gilbert Laporte

■ MC-16

Monday, 12:20-13:40

2.2.14

Rescheduling in railway operations

Chair: *Gabrio Curzio Caimi*

Chair: *Marco Laumanns*

1 - Comparing multi-criteria decision making methods for a railway dispatching problem

Anne Binder, Thomas Albrecht, Christian Gassel

2 - The effectiveness of rescheduling strategies: evidences from two case studies in Italy

Giorgio Medeossi, Giovanni Longo

3 - Dispatching support system for a main station

Martin Fuchsberger, Marco Laumanns

4 - Coping with extremely variable train delay on a complex railway junction: lesson learned from Beograd case study

Giovanni Longo, Giorgio Medeossi, Zorica Milanovic

■ MC-17

Monday, 12:20-13:40

1.3.14

Online Planning in Vehicle Routing and Scheduling

Chair: *Stefan Bock*

Chair: *Francesco Ferrucci*

1 - A dynamic vehicle routing problem with multiple trips

Michel Gendreau, Nabila Azi, Jean-Yves Potvin

2 - Schedule nervousness reduction in online vehicle routing

Joern Schoenberger, Stefan Voss, Herbert Kopfer

3 - Solving the dynamic ambulance relocation problem using approximate dynamic programming

Verena Schmid

4 - An analysis of the impact of dynamic vehicle routing in service delivery systems

Vitória Pureza, Daniel Lamarin

■ MC-18

Monday, 12:20-13:40

1.3.15

Stochastic Modeling and Simulation II

Chair: Zeev (Vladimir) Volkovich

1 - Approximation algorithms for the general multi assignment problem

Ron Adany, Sarit Kraus, Fernando Ordonez

2 - A randomized algorithm for estimation number of clusters

Zeev (Vladimir) Volkovich, Oleg Granichin, Dmitry Shalymov, Renata Avros

3 - On the number of coincidence of two homogeneous random walks with positive paces.

V. N. Surikov, I. A. Kravchenko

4 - Synergic process of speech signal energy transmission

Vladimir Zhuravlev, Dorovskykh Anatoliy

■ MC-19

Monday, 12:20-13:40

1.3.20

Mathematical Finance

Chair: *Diogo Pinheiro*

1 - Optimal life insurance purchase, consumption and investment decisions with multiple risky securities

Isabel Duarte, Diogo Pinheiro, Alberto A. Pinto, Stanley Pliska

2 - Risk and beliefs updating mechanisms for contingent claims valuation in incomplete markets

Diogo Pinheiro, Alberto A. Pinto, Athanassios Yannacopoulos, Stylianos Xanthopoulos

3 - Behavioural scenarios for contingent claims valuation in multiperiod incomplete markets

Nuno Azevedo, Diogo Pinheiro, Alberto A. Pinto, Athanassios Yannacopoulos, Stylianos Xanthopoulos

4 - Real options and signaling in strategic investment games

Takahiro Watanabe

■ MC-20

Monday, 12:20-13:40

1.3.33A

Cutting and Packing 3

Chair: *Ramon Alvarez-Valdes*

1 - The container loading problem with practical considerations

Maria Teresa Alonso, Francisco Parreno, Ramon Alvarez-Valdes, Jose Tamarit

2 - Coordination of the vehicle routing with time windows and the container loading

Olinto Araújo, Vinícius Armentano

3 - A model for the container stowage problem

Ana Moura, Paulo Triunfante Martins, António Andrade-Campos, Victor Lobo

4 - Cutting and packing algorithms research framework

Denis Nazarov

■ MC-21

Monday, 12:20-13:40

6.2.47

Optimization Modeling I

Chair: *Robert Fourer*

1 - Attacking hard mixed-integer optimization problems through the AMPL modeling language

Robert Fourer, David M. Gay

2 - A structure-conveying modelling language for mathematical and stochastic programming

Andreas Grothey, Jacek Gondzio, Marco Colombo, Kristian Woodsend, Jonathan Hogg

3 - Stochastic optimization: recent enhancements in algebraic modeling systems

Lutz Westermann, Michael Bussieck

4 - Rapid application development with optimj, a practitioner's experience report

David Gravot, Patrick Viry

■ MC-22

Monday, 12:20-13:40

3.1.10

OR in Education I

Chair: *Huiling Zhao*

1 - Structured process for systematic review of literature and the establishment of the references in multi-criteria decision aid

William Vianna, Edilson Giffhorn, Leonardo Ensslin

2 - The environmental impact of free school choice in kent (uk)

Huiling Zhao, Kim Parker, Cecilio Mar Molinero

3 - Social responsibility management system: the case study of estg-ipg

Ana Rosa, Rute Abreu, Constantino Rei

■ MC-23

Monday, 12:20-13:40

6.2.49

MOO: Algorithms for Multi-Objective Combinatorial Optimization III

Chair: *Luis Paquete*

1 - Comparing two territory partitions in districting problems: indices and practical issues

Fernando Pereira, José Rui Figueira, Vincent Mousseau, Bernard Roy

2 - A parallel evolutionary algorithm with multiple reference points for multi-objective combinatorial optimization

Arnaud Liefooghe, José Rui Figueira, El-Ghazali Talbi, Andrzej Wierzbicki

3 - The tree-dimensional bin-packing with 90° rotations

Marisa Figueiredo, Ana Almeida

4 - Multicriteria movement synchronization scheduling problems and algorithms

Zbigniew Tarapata

■ MC-24

Monday, 12:20-13:40

6.2.50

Bioinformatics III

Chair: *Jacek Blazewicz*

Chair: *Marta Szachniuk*

1 - A novel framework to elucidate core classes in a dataset

Daniele Soria, Jonathan Garibaldi

2 - Infrastructure behind the epipe framework

Peter Sackett

3 - Graph theoretic approaches to clustering

Roberta De Asmundis, Paola Festa, Mario Guarracino

4 - Predicting the evolution of biomedical ontologies

Catia Pesquita, Francisco Couto

■ MC-25

Monday, 12:20-13:40

6.2.48

Risk Management in Operations

Chair: *Stefan Spinler*

1 - A mixed-integer linear programming model for sovereign debt issuance

Malek Abdel Jawad, Paresh Date, Alessandra Canepa

2 - Pricing of full service repair contracts

Sebastian Huber, Stefan Spinler

3 - Game-theoretic analysis of forward market under uncertainty

Alexander Vasin, Agata Sharikova

4 - Retailer product portfolio selection & pricing problem

Soumojit Kumar, Uttam Sarkar

■ MC-26

Monday, 12:20-13:40

3.1.11

Machine Learning to help people with disabilities

Chair: *Emilio Parrado-Hernandez*

Chair: *Jaisiel Madrid-Sanchez*

1 - Automatic data processing for web accessibility personalization

Olatz Arbelaitz, Julio Abascal, Javier Muguerza, Iñigo Perona

2 - Identification of gait alterations with a wearable inertial system

Andreu Catala, Albert Samà, Diego Pardo

3 - Improving accessibility with machine learning

Manuel Ortega

4 - Sign language recognition

Agustin Gomez

■ MC-27

Monday, 12:20-13:40

8.2.06

Financial Optimization 3

Chair: *Laura Di Giacomo*

Chair: *André Salles*

1 - Markowitz principles for multi-period portfolio selection problems with bankruptcy condition

Thamayanthi Chellathurai

2 - Optimal control of exchange traded funds instruments (etf)

Laura Di Giacomo

3 - An approximate dp approach to benchmark practice-based heuristics for natural gas storage valuation

Nicola Secomandi, Guoming Lai, Francois Margot

4 - Liquidity risk in the Brazilian stock market: an empirical evidence

Alvaro Costa, André Salles

■ MC-28

Monday, 12:20-13:40

8.2.10

Applications of stochastic programming to the energy sector - gas

Chair: *Marte Fodstad*

- 1 - Evaluating the impact of forecasting techniques on a stochastic optimization model for a gas sale retailer**

Juan Ramon Trapero Arenas, Nikolaos Kourentzes, Francesca Maggioni

- 2 - A stochastic portfolio optimization model for the natural gas supply chain**

Marte Fodstad, Kjetil Midthun, Frode Rømo, Asgeir Tomasgard

- 3 - Hydrogen production facility network design with stochastic wind energy supply and nodal pricing**

Jorge Barnett Lawton, Mozart Menezes, Jarrod Goentzel

- 4 - Solving stochastic equilibrium problems with stochastic gradient methods: analysis of collaborative service provision in telecommunication sector**

Alexei Gaivoronski, Denis Becker

■ MC-29

Monday, 12:20-13:40

8.2.11

Algorithmic Applications of Boolean Functions

Chair: *Endre Boros*

1 - A boolean theory of tonal signatures

Bruno Simeone, Isabella Lari, Gilbert Nouno, Malik Mezzadri

2 - A classification problem and the maximal weight archipelago subgraph problem

Bela Vizvari, Bruno Simeone

3 - A polynomial algorithm for dualizing monotone boolean functions arising in geometry

Khaled Elbassioni

4 - Minimization of quadratic pseudo-boolean functions

Ivo Rosenberg, Calvin Mbuntcha-Wuntcha

■ MC-30

Monday, 12:20-13:40

8.2.13

MCDA II: Health and Environment

Chair: *Alec Morton*

Chair: *David Collier*

- 1 - Strategic appraisal of environmental risks: a contrast between the uk's stern review on the economics of climate change and its committee on radioactive waste management**

Alec Morton, Simon Dietz

- 2 - Lessons from two recent major MCDA projects**

David Collier, Michael Egan

- 3 - Facilitated health care priority setting at a time of economic crisis**

Mara Airoidi, Nikolaos Argyris, Alec Morton

- 4 - On the design of custom packs: grouping of medical disposable items for surgical procedures**

Brecht Cardoen, Mario Vanhoucke

■ MC-31

Monday, 12:20-13:40

8.2.15

Societal Complexity and Stakeholders

Chair: *Marcos Estellita Lins*

1 - Multi-actor multi-criteria analysis (mamca) as a means to cope with societal complexity

Klaas De Brucker, Cathy Macharis

2 - Systemic intervention - methodological pluralism in managing the problem situations

Slavica P. Petrovic

3 - Dialogical self, theory of mind and meta-cognition as a contribution

Marcos Estellita Lins, Angela Silva, Milena Diniz, Daniel Áreas

4 - Recent OR advances on societal complexity, stream methodology of societal complexity

Julien Cotret, Antoine Seilles

■ MC-32

Monday, 12:20-13:40

8.2.17

OR in Forestry II

Chair: *Isabel Martins*

Chair: *Miguel Constantino*

1 - Assessing sustainable management in forest mediterranean ecosystems in southern portugal.

Brigite Botequim, Paulo Borges, Miguel Constantino, Jose Borges

2 - Tree search for forest harvest scheduling problems subject to area and connectivity constraints

Teresa Neto, João Pedro Pedroso, Miguel Constantino, Isabel Martins

3 - Integer and multiobjective programming approaches for modelling target volume flows in harvest scheduling subject to maximum area restrictions

Maria da Conceicao Fonseca, Isabel Martins, Mujing Ye, Miguel Constantino, Jorge Cadima

■ MC-33

Monday, 12:20-13:40

8.2.19

Electric Vehicles

Chair: *Andrei Neboian*

1 - Fleet renewal with electric vehicles - a real options approach

Andrei Neboian, Stefan Spinler, Paul Kleindorfer

2 - Risk analysis to electric vehicles fast charging stations

Jorge Borges, Christos Ioakimidis

3 - Assessing the power sector-related environmental and cost impacts of plug-in hybrid electric vehicles in Germany

Reinhard Madlener, Christoph Mazur

■ MC-34

Monday, 12:20-13:40

8.2.23

Production and Inventory decisions with recycling

Chair: *Simone Zanoni*

1 - The value of flexibility of different sourcing strategies for spare parts after end-of-production

Rainer Kleber, Karl Inderfurth

2 - Multi-product economic lot scheduling problem with remanufacturing (el-spr) and yield loss

Simone Zanoni, Laura Mazzoldi, Ivan Ferretti

3 - Environmental collaboration in closed-loop supply chain with dynamic returns

Pietro De Giovanni

4 - Assessing the impact on optimal production capacities in a closed-loop logistics system of the assumption that returns are stochastically independent of sales

Ernest Bedito, Albert Corominas, Albert Corominas

■ MC-35

Monday, 12:20-13:40

6.2.46

Soft OR and Problem Structuring Methods II

Chair: *Fran Ackermann*

1 - 'getting messy' with problems: teaching students problem structuring methods

Fran Ackermann

2 - On verification of cognitive-map-based models of ill-structured situations

Svetlana Kovriga, Nina Abramova

3 - Improving surgical center management of a university hospital through combined soft and hard o.r. approaches

Leonardo Pessoa, Marcos Estellita Lins, Angela Silva, Roberto Fiszman, Milena Diniz

4 - Selection of executive aircraft using tools to support decision: cognitive maps and decision tree

Eliseu Zednik, Mischel Carmen N. Belderrain

■ MC-36

Monday, 12:20-13:40

3.1.05

Genetic Fuzzy Systems; Fuzzy Goal Programming 2

Chair: *Fernando Gomide*

Chair: *Mariano Jimenez-Lopez*

1 - Adaptive meta-heuristics with genetic fuzzy systems

Vitor Marques, Fernando Gomide

2 - A web based dss for improved innovation management

Kemal Kilic

3 - Fuzzy goal programming for portfolio selection

Verónica Cañal, Bilbao-Terol Amelia, Mar Arenas-Parra, Maria Victoria Rodriguez-Uria

4 - Heuristic procedures in goal programming: an application to fuzzy portfolio selection problems

Lourdes Canos, Maria J. Canos, Vicente Liern

■ MC-37

Monday, 12:20-13:40

3.1.09

OR Applications for Public Policy Assesment in Developing Countries

Chair: *Claudia Rave*

1 - Modeling approach for externality analysis of urban development in medellin metropolitan area

Claudia Rave, Patricia Jaramillo, Marcela Perez, Elizabeth Zapata

2 - Reverse logistics and environmental management in the oil supply chain management: a case study peru

Gladys Maquera, Iliana Gutiérrez, Jorge Maquera, Santos Valerio Príncipe Anticona

3 - Evaluation of the computer system and risks of information technology for peruvian entities

Mercedes Bustos

4 - Modeling platform development for scenario analysis and decision making, lad-t

Claudia Rave, Juan Esteban Restrepo, Fabian Giraldo, Elizabeth Zapata, Patricia Jaramillo

■ MC-38

Monday, 12:20-13:40

6.2.44

Recent Advances in the Economics Supported by OR I

Chair: *Ulrike Leopold-Wildburger*

Chair: *Stefan Pickl*

Chair: *Gerhard-Wilhelm Weber*

1 - Flexible capacity strategy in an asymmetric oligopoly market with competition and demand uncertainty

Yang Liu, Chi To Ng

2 - Forecasting by econometric models to supporting management

Tunde Dobrodolac

3 - Transnational interregional i-o table analysis for policy making

Mei-Chen Lo, Ozaki Toshimasa, Gwo-Hshiung Tzeng

4 - Entry deterrence under scope economies

Margarida Catalão-Lopes, Cesaltina Pires

■ MC-39

Monday, 12:20-13:40

6.2.45

Recent Advances in Optimal Control Theory

Chair: *Erik Kropat*

Chair: *Lyudmila Kuzmina*

1 - Higher order simple adaptive control

Isaac Yaesh, Uri Shaked

2 - A variational calculus based method for optimal control problems

Ana García-Bouso, Alberto Olivares, Ernesto Staffetti

3 - Optimal control under probability constraint

Guy Cohen, Pierre Carpentier, Jean-Philippe Chancelier

4 - A.m.lyapunov theory methodology and modelling problems

Lyudmila Kuzmina

■ MC-40

Monday, 12:20-13:40

6.2.52

Routing in telecommunication networks

Chair: *Amaro de Sousa*

1 - Cose-ms: an algorithm for srlg diverse routing

Teresa Gomes, Luís Fernandes

2 - Algorithms for inverse-multiplexed routing with minimal capacity requirements and differential delay accumulation

Joao Santos, João Pedro, Paulo Monteiro, João Pires

3 - Infeasibility in inverse shortest path routing problems

Mikael Call, Kaj Holmberg

4 - Models for optimal survivable routing with a minimum number of hops: comparing disaggregated with aggregated models

Pedro Patrício, Luis Gouveia, Amaro de Sousa

■ MC-41

Monday, 12:20-13:40

3.1.06

Topics in Revenue Management

Chair: *Nishant Mishra*

- 1 - Allocation of returned products among different recovery options through an opportunity cost based dynamic approach**

Oznur Ozdemir, Meltem Denizel, Mark Ferguson

- 2 - A model for competition in network revenue management**

Nishant Mishra

- 3 - Managing the inventories of perishable goods with controllable shelf lives**

Qing Li

- 4 - Explaining stickiness in prices of non-perishable goods under dynamic pricing policies**

Gunnar Feldmann, Abhijit Deshmukh

■ MC-42

Monday, 12:20-13:40

3.1.07

Solution Algorithms for Bilevel Problems

Chair: *Ayalew Getachew Mersha*

1 - Bilevel stochastic optimization approach to natural gas cash-out problem

Vyacheslav Kalashnikov, Gerardo Perez, Nataliya Kalashnykova, Asgeir Tomasgard

2 - Global optimization of quadratic bilevel problems

Oleg Khamisov

3 - Computing the pareto frontier of a bi-objective bilevel linear problem using a multiobjective mixed-integer programming algorithm

Maria João Alves, Stephan Dempe, Joaquim Judice

■ MC-43

Monday, 12:20-13:40

8.2.02

Algorithmic Decision Theory 3

Chair: *Federico Della Croce*

1 - Pareto-search in discrete vector optimization problems.

Walter Habenicht

2 - An empirical study of the core concept for the multidimensional knapsack problem

Andre Amaral, José Rui Figueira

3 - A strong branching approach for the multi-dimensional knapsack problem

Federico Della Croce, Andrea Grosso

4 - Finding nadir points for multi-criteria integer programming problems

Banu Lokman, Murat Koksalan

■ MC-44

Monday, 12:20-13:40

8.2.03

Portfolio Decision Analysis III

Chair: *Jeffrey Keisler*

1 - Does the decision analysis match the portfolio?

Jeffrey Keisler, Jeffrey Stonebraker

2 - Hierarchical portfolio decision analysis for developing corporate strategies

Kevin Bossley

3 - Valuing business benefits more consistently

Santiago Castro

■ MC-45

Monday, 12:20-13:40

8.2.12

General Topics in OR III

Chair: *Premysl Sucha*

1 - Mahalanobis-taguchi system for the prediction of pressure ulcers development in surgical patients

Chao-Ton Su, Li-Fei Chen, Yan-Cheng Chen

2 - The evaluation analysis of rfid adoption for taiwan logistic industry

Ling-Lang Tang, Cheng-Chuang Hon

3 - Take-give resources in project scheduling with time windows

Premysl Sucha, Zdenek Hanzalek

■ MC-46

Monday, 12:20-13:40

8.2.14

OR on Environmental Networks and Management

Chair: *Erik Kropat*

Chair: *Gerhard-Wilhelm Weber*

1 - Species specific connectivity in reserve-network design

Leonor S.Pinto, J. Orestes Cerdeira, Raul Brás, Mar Cabeza, Kevin Gaston

2 - Gene-environment networks under ellipsoidal uncertainty

Erik Kropat, Gerhard-Wilhelm Weber, Selma Belen

■ MC-47

Monday, 12:20-13:40

8.2.16

OR in Oil Sector II

Chair: *Irina Dolgoplova*

- 1 - The development of a decision support system for management of petroleum hydrocarbon contamination in soil**

Aisha Bello-Dambatta, Akbar Javadi

■ MC-48

Monday, 12:20-13:40

8.2.04

Green vehicle routing and scheduling

Chair: *Nora Touati Moun gla*

1 - Strategic planning for disaster recovery with stochastic last mile distribution

Pascal Van Hentenryck, Carleton Coffrin

2 - A bi-objective vehicle routing and scheduling problem for planning hazardous materials distribution

Konstantinos Androutsopoulos, Konstantinos Zografos

3 - About green vehicle routing and scheduling problem

Nora Touati Moun gla, Vincent Jost

4 - Modeling sustainable traffic assignment policies using bilevel programming

Semih Yalcindag, S. Ilker Birbil, Orhan Feyzioglu, Orhan Ilker Kolak, Nilay Noyan

■ MD-01

Monday, 14:00-15:20

Aula Magna

Keynote Talk 4

Chair: *Stefan Nickel*

1 - Location problems on networks with routing

Elena Fernandez

■ MD-02

Monday, 14:00-15:20

3.2.14

Algorithms for planning and scheduling problems

Chair: *Eleni Hadjiconstantinou*

1 - A multi-load agv dispatching problem in seaport container terminals

Evelina Klerides, Eleni Hadjiconstantinou

2 - A branch-and-price algorithm for the bin packing problem with conflicts

Joe Naoum-Sawaya, Samir Elhedhli

3 - Project scheduling under multiple resource constraints - a case study in the Portuguese navy

Humberto Duarte Afonso, Joao Telhada

4 - Multi-run heuristic algorithm for conflict-free agv scheduling in container terminals

Fabio Furini, Eleni Hadjiconstantinou, Evelina Klerides

■ MD-03

Monday, 14:00-15:20

3.2.15

Dynamic routing problems

Chair: *Philippe Lacomme*

Chair: *Caroline Prodhon*

- 1 - Parameter tuning for dynamic optimization. application: the dynamic pickup and delivery problem with time windows**

Jawad Omari

- 2 - Dynamic vehicle routing for demand responsive transportation**

Jorge Pinho de Sousa, Rui Gomes, Teresa Galvão Dias

- 3 - Solving the vehicle routing problem with stochastic demands using the simurial procedure**

Javier Faulin, Angel A. Juan, Daniel Riera, Scott Grasman, Ricardo Solar

■ MD-04

Monday, 14:00-15:20

3.2.13

Job Shop scheduling with metaheuristics

Chair: *Ibrahim Osman*

Chair: *Maurizio Faccio*

1 - Local search with a job-insertion based neighborhood for the job shop with setup times

Reinhard Bürky, Heinz Gröflin

2 - Scheduling in a job shop production system with multiple parallel machines and multiple products in case of unknown process cycle

Maurizio Faccio, Anna Azzi, Alessandro Persona, Fabio Sgarbossa

3 - A hybrid shifting bottleneck-tabu search heuristic for the job shop total weighted tardiness problem

Kerem Bulbul

■ MD-05

Monday, 14:00-15:20

3.2.16

Statistics

Chair: *Leonidas Pitsoulis*

Chair: *Francisco Aparisi*

1 - A fast algorithm for robust regression

Leonidas Pitsoulis

2 - Optimization of a set of multiple Poisson statistical quality control charts

Francisco Aparisi, Eugenio Epprecht

3 - An efficient optimization method for revealing local optima of projection pursuit indices

Larabi Marie-Sainte Souad, Alain Berro, Anne Ruiz-Gazen

■ MD-06

Monday, 14:00-15:20

8.2.30

DEA Methodology IV

Chair: *Armando Milioni*

1 - Weight restrictions in data envelopment analysis using multicriteria tools

Lidia Angulo-Meza, João Carlos Soares de Mello, Lucas Oliveira

2 - An interactive approach to produce common weights and estimation of value efficiency in data envelopment analysis

Majid Zohrehbandian

3 - Parametric DEA models with weight constraints

Armando Milioni, Rodrigo Cesar Silva

4 - Estimating Malmquist productivity index by using stochastic programming models

Mahnaz Mirbolooki, Gholam Reza Jahanshahloo, Farhad Hosseinzadeh Lotfi, Mohammad Hassan Behzadi

■ MD-08

Monday, 14:00-15:20

6.1.36

Scheduling Problems - Approaches and Complexity

Chair: *Frank Werner*

1 - Single machine scheduling with a non-renewable financial resource

Evgeny Gafarov, Alexander Lazarev, Frank Werner

2 - Solving a scheduling problem at cross docking terminals

Ruslan Sadykov

3 - Dual and reverse problems to minimize maximum penalty scheduling problems.

Alexander Lazarev

4 - Optimization and performance analysis of parallel dynamic programming algorithm for knapsack problem

Alexander Lazarev, Mikhail Posypkin

■ MD-09

Monday, 14:00-15:20

6.2.53

Nonlinear optimization for industrial applications

Chair: *Thomas Lehmann*

1 - Nonlinear mixed-integer programs arising in petroleum industry

Thomas Lehmann, Klaus Schittkowski, Oliver Exler

2 - Fast and safe container cranes as bilevel optimal control problems

Matthias Knauer, Christof Büskens

3 - Dae optimal control problems with applications in electrical engineering

Martin Kunkel, Matthias Gerds

■ MD-10

Monday, 14:00-15:20

6.2.56

Graphs and Networks IV

Chair: *Cédric Bentz*

1 - Minimizing the number of critical stages for the on-line Steiner tree problem

Nicolas Thibault

2 - Minimum d -blockers and d -transversals for the maximum stable set problem

Christophe Picouleau, Dominique de Werra, Marie-Christine Costa

3 - Dense graph partition for community detection

Julien Darlay, Nadia Brauner, Julien Moncel

4 - Power domination in graphs

Paul Dorbec

■ MD-11

Monday, 14:00-15:20

8.2.38

Stochastic Models in Manpower Planning

Chair: *Andreas Georgiou*

1 - A model based study on the career prospects of individuals in an Indian university

Arindam Gupta, Asis Kumar Chattopadhyay

2 - Dealing with observable and latent heterogeneity in Markov manpower systems

Marie-Anne Guerry

3 - The dynamic behavior of a mixed push-pull manpower model

Tim De Feyter, Marie-Anne Guerry

4 - Investigating aspirations, priorities and optimization opportunities in Markov manpower planning models

Andreas Georgiou

5 - Control aspects in an enhanced manpower planning model

Nikolas Tsantas, Vasileios Dimitriou

■ MD-12

Monday, 14:00-15:20

8.2.39

AHP 04

Chair: *Y. Ilker Topcu*

1 - Finding effective strategies for improving textile and clothing supply chain in pakistan using SWOT analysis and AHP

Deedar Hussain, Manuel Figueiredo, Anabela Pereira Tereso, Fernando Ferreira

2 - Risk management in the process of foreign supplier selection: case study

Olga Fedotova, Luis Ferreira

3 - An AHP model to evaluate brand equity of sports clubs

Mine Isik, Ozay Ozaydin, Y. Ilker Topcu, Sebnem Burnaz

■ MD-13

Monday, 14:00-15:20

2.2.21

Discrete Location I

Chair: *Antonio Manuel Rodríguez-Chía*

1 - Discrete location for bundled demand points

Alfredo Marín

2 - Lower bounds for a capacitated facility location problem with penalties and revenues

Maria João Lopes

3 - Assessing the accuracy for estimation of origin-destination matrices in the railways system context

Eva Barrena, M^a Teresa Cáceres, Francisco A. Ortega, Miguel Angel Pozo

4 - On a common structure of the discrete optimization with ordering

Antonio Manuel Rodríguez-Chía, Elena Fernandez, Justo Puerto

■ MD-14

Monday, 14:00-15:20

2.2.15

Pricing Issues

Chair: *Carla A. S. Geraldés*

1 - A new multi-objective approach for pricing and distribution in a supply chain

D. Shishebori, S.g.r. Jalali-Naini, M. Karimi-Nasab

2 - Determination of pre-order and after-order prices for a capacitated supply system

Bisheng Du, Christian Larsen

3 - Competitive price-matching guarantees under demand uncertainty and customer heterogeneity: effects of product availability and its verification

Arcan Nalca, Tamer Boyaci, Saibal Ray

4 - Integrated approaches to warehouse planning and operations

Carla A. S. Geraldés, Sameiro Carvalho, Guilherme Pereira

■ MD-15

Monday, 14:00-15:20

2.2.12

Exact Algorithms for Vehicle Routing

Chair: *Roberto Baldacci*

1 - The vehicle routing problem with time windows and edge set costs

Line Blander Reinhardt, David Pisinger, Mads Kehlet Jepsen

2 - Experiments with new cuts on the vrp

Eduardo Uchoa, Diego Pecin, Artur Pessoa, Marcus Poggi de Aragão

3 - Column generation and branch-and-price for the m-pvrp

Sandra Ulrich Nogueira, Christian Prins, Roberto Wolfler-Calvo

4 - New benchmark results for the capacitated vehicle routing problem

Roberto Baldacci, Aristide Mingozzi, Roberto Roberti

■ MD-16

Monday, 14:00-15:20

2.2.14

Robust planning and rescheduling

Chair: *Natalia Kliewer*

1 - Strategic planning in the airline industry under uncertainty

Marc Naumann, Leena Suhl, Achim Koberstein

2 - An applicable recovery framework for airline operations

Lucian Ionescu, Viktor Dück, Natalia Kliewer

3 - Approaches to increase delay-tolerance of vehicle and crew schedules in public bus transport

Bastian Amberg, Natalia Kliewer, Stefan Kramkowski

4 - GRASP algorithms for the railway network design problem

Federico Perea, Antonio J. Lozano, Juan A. Mesa

■ MD-17

Monday, 14:00-15:20

1.3.14

Breaks in Vehicle Routing and Scheduling

Chair: *Christoph Manuel Meyer*

1 - Vehicle routing under consideration of the European social legislation

Christoph Manuel Meyer, Herbert Kopfer

2 - Vehicle routing with breaks and rests, a practitioner's point of view

Robert Scheffermann, Andreas Cardeneo, Werner Heid

3 - A pickup and delivery model considering EU driving time regulations

Alexandra Hartmann

■ MD-18

Monday, 14:00-15:20

1.3.15

Queueing Systems

Chair: *Erik Kropat*

Chair: *Zeev (Vladimir) Volkovich*

Chair: *Gerhard-Wilhelm Weber*

1 - The effect of the number of servers in quasi-random-input queues

Moshe Eben-Chaime

2 - Queuing system simulation and efficiency evaluation by petri nets and data envelopment analysis

Dragana Makajic-Nikolic, Gordana Savic, Mirko Vujosevic, Novak Novokmet

3 - Queues with boundary assistance and the many effects of truncation

Giang Nguyen, Peter Taylor, Guy Latouche

4 - Analytical study of a queueing system with non-geometric tail behaviour

Mark Van Lokeren, Bart Steyaert, Herwig Bruneel

■ MD-19

Monday, 14:00-15:20

1.3.20

Industrial Organization

Chair: *Bruno M.P. M. Oliveira*

Chair: *Luis Ferreira*

1 - Edgeworthian economies with selfish participants

Bruno M.P. M. Oliveira, Luis Ferreira, Alberto A. Pinto, Athanassios Yannacopoulos, Barbel Finkenstadt

2 - Patents in new technologies

Luis Ferreira

3 - A stochastic competitive R&D race where winner-takes-all

Boaz Golany, Inbal Mund, Uriel G. Rothblum

4 - A two-ends model for the competitive firm under price uncertainty

Alberto A. Álvarez-López, Inmaculada Rodríguez-puerta

■ MD-20

Monday, 14:00-15:20

1.3.33A

Cutting and Packing 4

Chair: *Yuri Stoyan*

1 - A strategic neighborhood search approach for the cylinder packing problem

Shigeyuki Takahara

2 - A formulation space search heuristic for the circle packing problem

Claudia Lopez, J. E. Beasley

3 - Covering a non-convex polytope by minimal number of congruent parallelepipeds

Yuri Stoyan, E.s. Sosurcka

4 - An efficient mechanism for solving two phase packing problems

Arik Sadeh, David Raz

■ MD-21

Monday, 14:00-15:20

6.2.47

Optimization Modeling II

Chair: *Bjarni Kristjansson*

1 - Recent enhancements in GAMS

Jan-Hendrik Jagla, Lutz Westermann

2 - MPL for python - introducing new scripting and library interfaces for the MPL modeling language

Sandip Pindoria, Bjarni Kristjansson

3 - Fast & flexible modeling with AIMMS

Frans de Rooij

4 - New developments in the ibm ilog optimization product suite

Alex Fleischer, Hermann Stolle

■ MD-22

Monday, 14:00-15:20

3.1.10

OR in Education II

Chair: *Ruy Costa*

1 - OR education at European level: a case of cooperation portugal-romania

Joao Miranda, Mariana Nagy

2 - The challenge of teaching OR

Gertjan de Lange

3 - Forecasting the overall academic performance of university undergraduates using neural networks

Ruy Costa, Susana Rodrigues

■ MD-23

Monday, 14:00-15:20

6.2.49

MOO: Multi-Objective Combinatorial Optimization

Chair: *Matthias Ehrgott*

1 - On the computation of all supported efficient solutions in multi-objective integer network flow problems

Augusto Eusébio, José Rui Figueira

2 - A multi-objective branch-and-cut algorithm and its application to the multi-modal traveling salesman problem

Nicolas Jozefowicz, Gilbert Laporte, Frédéric Semet

3 - Analyzing optimal paths in coloured-edge graphs with Euclidean weights

Felipe Lillo, Andrew Ensor

4 - Tight upper bound on the number of optimal paths in weighted coloured-edge graphs

Andrew Ensor, Felipe Lillo

■ MD-24

Monday, 14:00-15:20

6.2.50

Bioinformatics IV

Chair: *Ceyda Oguz*

1 - Manhattan Hamiltonian path in nmr study

Marta Szachniuk

2 - A study of different hyper-heuristics for sequencing by hybridization problem

Aleksandra Swiercz, Wojciech Mruczkiewicz, Jacek Blazewicz, Graham Kendall, Edmund Burke

3 - Petri net based model of atherosclerosis

Piotr Formanowicz, Dorota Formanowicz, Tomasz Nowak

4 - Mathematical model of blood flow and nutrients delivery

Trishna Fadjrir, Herman Mawengkang

■ MD-25

Monday, 14:00-15:20

6.2.48

Financial Dynamics and Bubbles

Chair: *Gerhard-Wilhelm Weber*

1 - New unified approaches on identification and optimization of financial processes

Gerhard-Wilhelm Weber

2 - Stability investigation of key czech banks by means of the financial modelling

Petr Gurný

3 - Modelling financial bubbles by stochastic and ellipsoidal calculus and copulas

Efsun Kürüm, Gerhard-Wilhelm Weber

4 - Determination of trade based manipulation in istanbul stock exchange

Melik Kamisli, Nuray Girginer

■ MD-26

Monday, 14:00-15:20

3.1.11

Machine Learning for Multiple Sources

Chair: *Sureyya Ozogur-Akyuz*

Chair: *Zakria Hussain*

1 - Exploring relations of entities via common space representation

Sandor Szedmak

2 - Selecting rows and columns of large datasets for training support vector regression models

Kübra Yaman, Ozden Gur Ali

3 - Adapted infinite kernel learning by multi-local algorithm

Sureyya Ozogur-Akyuz, Gürkan Üstünkar, Gerhard-Wilhelm Weber

4 - Sparse convex one-class kernel fisher discriminant analysis

Tom Diethe, Janaina Mourão-Miranda, John Shawe-Taylor

■ MD-27

Monday, 14:00-15:20

8.2.06

Financial Optimization 4

Chair: *Christina Erlwein*

1 - Sharpe ratios and implied risk free rates

Michael Best

2 - Optimal trading of algorithmic orders in a liquidity fragmented market place

Natasa Krejic, Miles Kumaresan

3 - Hmm-based investment strategies for asset allocation

Christina Erlwein, Rogemar Mamon, Matt Davison

■ MD-28

Monday, 14:00-15:20

8.2.10

Stochastic Programming Algorithms

Chair: *Katarina Vla*

1 - Scenarios and events in multi-stage stochastic linear programming

Cesar Beltran-Royo, Laureano Fernando Escudero, Romy-Elena Rodriguez-Ravines

2 - Solution procedures for probabilistically constrained problems

Ebru Mevlude Angun

3 - Integer linear stochastic programming with multiple objective

Amrouche Salima

4 - Sample-path approach to constrained optimization

Katarina Vla, Natasa Krejic, Natasa Krklec

■ MD-29

Monday, 14:00-15:20

8.2.11

Boolean Optimization in Graph Theory

Chair: *Martin Milanic*

1 - Optimizing boolean functions for cryptographic applications

Enes Pasalic

2 - On some graph classes related to perfect graphs: a survey

Flavia Bonomo, Guillermo Duran, Martin Safe, Annegret Katrin Wagler

3 - Scheduling the argentine volleyball league: a real-world application of the traveling tournament problem with couples of teams

Guillermo Duran, Flavia Bonomo, Javier Marengo, Daniela Saban

4 - Complexity results for equistable graphs and related classes

Martin Milanic, Jim Orlin, Gabor Rudolf

■ MD-30

Monday, 14:00-15:20

8.2.13

MCDA II: Sorting Models, theoretical aspects and other issues.

Chair: *Constantin Zopounidis*

Chair: *Michael Doumpos*

1 - Multi-criteria relational clustering: an empirical analysis of the relation's properties

Julien Roland, Stefan Eppe, Yves De Smet

2 - A group decision making procedure and its incorporation in the mmassi/ti dss.

Teresa Pereira, Sameiro Carvalho

3 - Negotiation template analysis with electre-tri based scoring system

Tomasz Wachowicz

■ MD-31

Monday, 14:00-15:20

8.2.15

Societal Complexity and Education

Chair: *Dorien DeTombe*

1 - Religious-political conflict resolution

Cathal Brugha

2 - Basic social math

Jared Hanson

3 - The small towns development strategies and instruments based on the utilization of local natural and cultural heritage

Eva Kralova, Martin Baloga

■ MD-32

Monday, 14:00-15:20

8.2.17

OR in Forestry III

Chair: *Ola Eriksson*

- 1 - A stochastic dynamic programming approach to optimize short-rotation coppice systems management scheduling under fire risk. an application to eucalypt plantations.**

Liliana Ferreira, Miguel Constantino, Jose Borges, Jordi Garcia_Gonzalo

- 2 - Integrating fire risk considerations in landscape level forest planning**

José González-Olabarria, Timo Pukkala

- 3 - Accountability on forest fires: evidence of social responsibility**

Rute Abreu, Fátima David

- 4 - European forest decision support systems - what do we have and what is missing?**

Ola Eriksson

■ MD-33

Monday, 14:00-15:20

8.2.19

Environmental Management I

Chair: *Marta Castilho Gomes*

- 1 - Study of electronic ballast for lighting systems from the viewpoint of electromagnetic compatibility and power quality issues: a contribution to efficiency analysis**

William Vianna, Raul Eduardo Fernandez

- 2 - A cost optimization model for hazardous medical waste management**

Marta Castilho Gomes, João Nunes de Almeida, João Quinhones Levy

■ MD-34

Monday, 14:00-15:20

8.2.23

Model Formulations and Real World Applications of Lot Sizing and Scheduling I

Chair: *Alistair Clark*

- 1 - A multi-objective mixed integer linear programming approach to shelf-life integrated lot-sizing and scheduling in yogurt production**

Pedro Amorim, Bernardo Almada-Lobo

- 2 - Solving the stochastic single-level capacitated lot sizing problem with a scenario approach**

Florian Sahling, Stefan Helber, Katja Schimmelpfeng

- 3 - A multi-level capacitated lot sizing problem considering discounts, set-ups and line assignment using a mip based heuristic and column generation**

Philipp Thurnher, Hubert Missbauer

- 4 - Integrated production planning of a portuguese pulp and paper mill**

Maristela Santos, Andre Alves, Bernardo Almada-Lobo

■ MD-35

Monday, 14:00-15:20

6.2.46

Soft OR and Problem Structuring Methods III

Chair: *Vesna Cancer*

Chair: *Victor Vidal*

1 - Creative thinking techniques in multi-criteria decision-making

Vesna Cancer

2 - Innovation, creativity and soft systems methodology

Giles Hindle

3 - Systemic strategy development and implementation using the example of a lead brokerage financial service provider

Paul Flachskampf

4 - On the dynamics of value networks

Bent Erik Bakken

■ MD-36

Monday, 14:00-15:20

3.1.05

Fuzzy Optimization

Chair: *Joao Miguel da Costa Sousa*

Chair: *Susana Vieira*

1 - Multi-objective optimization of feature selection problems using fuzzy models

Ozlem Turksen, Susana Vieira, Joao Miguel da Costa Sousa, Aysen Apaydin

2 - Fuzzy criteria for multi-objective ant feature selection

Susana Vieira, Joao Miguel da Costa Sousa

3 - A new filter-wrapper method for large databases by optimizing fuzzy classification models

Joao Miguel da Costa Sousa, Federico Cismondi, Andre Fialho, Susana Vieira, Shane Reti, Michael Howell, Stan Finkelstein

4 - An integrated evaluation framework for customization strategies

Gulcin Buyukozkan

■ MD-37

Monday, 14:00-15:20

3.1.09

OR for Development and Developing Countries I

Chair: *Honora Smith*

1 - Passengers air transport system with mini and major hubs: a case study applied to Brazil

Nelio D Pizzolato, Rafael M. A. de Figueiredo, Morton E. O'Kelly, Madiagne Diallo

2 - Engineering research in developing countries, some reflections based on scientific publications

Víctor Bucheli Guerrero, Roberto Zarama Urdaneta

3 - Dynamic modelling of the usage of a rural community health centre in a developing country: the growth of trust

Honora Smith, Paul Harper

■ MD-38

Monday, 14:00-15:20

6.2.44

Recent Advances in the Economics Supported by OR II

Chair: *Ulrike Leopold-Wildburger*

Chair: *Gerhard-Wilhelm Weber*

1 - Sustainability screw: role of relative time scales

Jerzy Filar, Jacek Krawczyk, Manju Agarwal

2 - The gambler's ruin problem: simulation

Silvana Ligia Vincenzi Bortolotti, Fernando Moreira Junior, Afonso Farias Sousa Junior

■ MD-39

Monday, 14:00-15:20

6.2.45

Dynamic Programming Approach to Optimal Control Problems

Chair: *Fausto Gozzi*

1 - Optimal mix in the interconnection of drinking water sources

Alessandra Buratto, Chiara D'Alpaos

2 - Optimal population problem: the role of finite life

Giorgio Fabbri, Raouf Boucekkine, Fausto Gozzi

3 - On the sub-optimality cost of immediate annuitization in dc pension funds

Elena Vigna, Marina Di Giacinto

■ MD-40

Monday, 14:00-15:20

6.2.52

Network design 2

Chair: *Bernard Fortz*

1 - A cutting plane algorithm for the rsap

Paula Carroll, Bernard Fortz, Martine Labbé, Seán McGarraghy

2 - Optimal streaming network with relay nodes

Eric Gourdin, Fabien Mathieu

3 - Transmission expansion planning with re-design

Michael Poss, Claudia Sagastizabal

4 - A new demand uncertainty set definition and the robust network loading problem

Aysegul Altin Kayhan, Hande Yaman, Mustafa Pinar

■ MD-41

Monday, 14:00-15:20

3.1.06

Advances in Revenue Management

Chair: *Ayse Kocabiyikoglu*

1 - Decision making in revenue management: an experimental study

Mert Hakan Hekimo?lu, Ayse Kocabiyikoglu, Itir Gogus

2 - Performance-based contracts for outpatient medical services

Houyuan Jiang, James Z. Pang, Sergei Savin

3 - Dynamic pricing of high speed rail with transport competition, substitutable schedule and overbooking

Kimitoshi Sato, Katsushige Sawaki

■ MD-42

Monday, 14:00-15:20

3.1.07

Theory of Bilevel Programming

Chair: *Joydeep Dutta*

1 - Optimality conditions for bilevel programming problems

Stephan Dempe, Alain B. Zemkoho

2 - Bilevel programming in hilbert space

Ayalew Getachew Mersha

3 - Optimality conditions for a simple bilevel programming problem

Joydeep Dutta

■ MD-43

Monday, 14:00-15:20

8.2.02

Algorithmic Decision Theory 4

Chair: *Sasa Pekec*

1 - Management and development of profiles by learning for multicriteria decision support

Arnaud Martin, Pascale Zaraté, Guy Camilleri

2 - Aggregation operations in multi-criteria simple games

Luisa Monroy, Francisco Ramon Fernandez

3 - Preconditions for information aggregation in prediction markets

Sasa Pekec

4 - Bidding strategies for real-life small loan auctions

Hannele Wallenius, Lauri Puro, Jyrki Wallenius, Jeffrey Teich

■ MD-44

Monday, 14:00-15:20

8.2.03

Modelling complex systems

Chair: *Pierre Kunsch*

1 - A systemic dynamic approach of the financial crisis

Pierre Kunsch

2 - Use of management science systemic methodologies in environmental management and sustainability

Alberto Paucar-Caceres

3 - Closed loop supply chains: a systems dynamics model for analyzing sustainable business policies for shared partners in a chain

Jose Cruz

4 - Collective animal manure management simulation and environmental impact

Francois Guerrin, Jean-Marie Paillat

■ MD-45

Monday, 14:00-15:20

8.2.12

Novel opportunities of DC programming and DCA for Industry and Finance

Chair: *Hoai An Le Thi*

- 1 - Solving the min m-dominating set problem by a continuous optimization approach based on dc programming and dca**

Julien Schleich, Hoai An Le Thi, Pascal Bouvry

- 2 - A dc programming approach for constrained two-dimensional non-guillotine cutting**

Mahdi Moeini, Hoai An Le Thi, Tao Pham Dinh

- 3 - Power control in cellular networks via dc programming and dc algorithms (dca)**

Anh Son Ta, Hoai An Le Thi, Tao Pham Dinh

- 4 - Scheduling of lifting vehicle and quay crane in automated port container terminals**

Le Hoai Minh

■ MD-46

Monday, 14:00-15:20

8.2.14

Semi-Infinite Optimization I

Chair: *Vladimir Shikhman*

1 - Generalized semi-infinite programming: the nonsmooth symmetric reduction ansatz

Vladimir Shikhman, Hubertus Th. Jongen

2 - Multiobjective programming problems with fuzzy random coefficients

Monga K Luhandjula

■ MD-47

Monday, 14:00-15:20

8.2.16

OR in Oil Sector I

Chair: *Irina Dolgoplova*

1 - Network design of petroleum supply chains

Leão Fernandes, Ana Paula Barbósa-Póvoa, Susana Relvas

2 - A simulated annealing approach for scheduling workover rigs on onshore oil production

Geraldo Mauri, Glaydston Ribeiro, Luiz A. N. Lorena

3 - Multiproduct pipeline scheduling systems

Susana Relvas, Ana Paula Barbósa-Póvoa, Henrique Matos

4 - Novel continuous nonlinear optimization approach for refinery scheduling

Joao Lauro D. Facó', Fabio Fagundez, Adilson Elias Xavier

■ MD-48

Monday, 14:00-15:20

8.2.04

Multi-objective optimization

Chair: *Nora Touati Mougla*

1 - Computation of best-compromise route for cycling

Gaël Sauvanet, Emmanuel Néron, Hervé Baptiste

2 - New insights of preference modeling in multiobjective optimization

Souhila Kaci, Nora Touati Mougla

■ ME-01

Monday, 15:40-17:00

Aula Magna

Plenary Talk 1

Chair: *Dominique de Werra*

1 - The agencies method for modeling coalitions and cooperation in games

John F. Nash, Jr.

■ MF-02

Monday, 17:20-18:40

3.2.14

Flexible shop scheduling by Metaheuristics and solutions for real problems

Chair: Lorena Pradenas

1 - A genetic algorithm for the flexible job shop problem

Lorena Pradenas, Rosa Medina, Víctor Parada

2 - The inverse power index problem

Sascha Kurz

3 - Signal decoding in multi-antenna systems using second-order cone programming

Edmund Burke, Jakub Marecek, Andrew J. Parkes

4 - A binary programming model to the dynamic search problem

Carlos Diego Rodrigues, Boris Detienne, Dominique Quadri, Philippe Michelon

■ MF-03

Monday, 17:20-18:40

3.2.15

Population-based metaheuristics for routing problems

Chair: *Caroline Prodhon*

Chair: *Philippe Lacomme*

1 - Memetic algorithm with diversity enhancement: an efficient approach for hard multi-attribute vehicle routing problems

Thibaut Vidal, Teodor Gabriel Crainic, Michel Gendreau, Nadia Lahrichi, Walter Rei

2 - A new ant colony optimization on vehicle routing problem with heterogeneous fleet, mixed backhauls, and time windows

Farah Belmecheri, Christian Prins, Farouk Yalaoui, Lionel Amodeo

3 - An artificial bee colony algorithm for the capacitated vehicle routing problem

Sin C. Ho, Wai Yuen Szeto, Yongzhong Wu

4 - A hybrid genetic algorithm (hga) for the multi-depot pickup and delivery problem (mdpdp)

Pairoj Chaichiratikul, Eleni Hadjiconstantinou

■ MF-04

Monday, 17:20-18:40

3.2.13

Shop scheduling with metaheuristics

Chair: *André Rossi*

Chair: *Nicolau Santos*

1 - A solution approach for flexible job shop scheduling problem using artificial immune system

Aydin Sipahioglu, Alper Aladag

2 - Master-slave multicore metaheuristic for the permutation flowshop problem

Eva Vallada, Gema Escrivá

3 - Permutation flowshop scheduling with makespan and tardiness objectives by GRASP

Iryna Yevseyeva, Jorge Pinho de Sousa, Luis Guardao

4 - Metaheuristics for minimizing total tardiness in the permutation flowshop with release dates

Nicolau Santos, João Pedro Pedroso

■ MF-05

Monday, 17:20-18:40

3.2.16

EURO Doctoral Dissertation Award

Chair: *Mikael Rönnqvist*

1 - Operating room planning and scheduling: solving a surgical case sequencing problem

Brecht Cardoen

2 - Application-oriented mixed integer non-linear programming

Claudia D'Ambrosio

3 - A mathematical contribution of statistical learning and continuous optimization using infinite and semi-infinite programming to computational statistics

Sureyya Ozogur-Akyuz

■ MF-06

Monday, 17:20-18:40

8.2.30

DEA Methodology V

Chair: *Marcos Estellita Lins*

1 - Ratio-based efficiency analysis (rea)

Antti Punkka, Ahti Salo

2 - Measuring the balance of DEA efficiency scores: the balance score beta

Nadia Vazquez Novoa, Heinz Ahn, Ludmila Neumann, Juan Pablo De Francesco

3 - Three way decomposition of the efficiency of andalusian economy

Antonio F. Amores, Thijs ten Raa

4 - The use of problem structuring methods in health policy and performance assessment

Marcos Estellita Lins, Angela Silva, Maria Stella Castro Lobo, Roberto Fiszman, Leonardo Pessoa, Nilo Chagas

■ MF-07

Monday, 17:20-18:40

8.2.47

DEA Application IX

Chair: *Meryem Duygun Fethi*

- 1 - Reallocating agricultural greenhouse gas emissions among European countries through a zero sum gains DEA model**

Amílcar Serrão

- 2 - Efficiency study of Indian banks during the reforms — a data envelopment analysis approach**

Debaprosanna Nandy

- 3 - Efficiency analysis of the mfis in bolivia**

Elena Sanchez

- 4 - Efficiency, capital structure and institutional shareholders**

Tsai Lien Yeh, Jhu-Ning Jhang

■ MF-08

Monday, 17:20-18:40

6.1.36

Scheduling: Algorithms and practical cases

Chair: *Mario Vanhoucke*

1 - A meta-heuristic optimization approach for job shop scheduling and its practical applications

Veronique Sels, Mario Vanhoucke

2 - Managerial insights in reactive personnel re-rostering

Broos Maenhout, Mario Vanhoucke

3 - An experimental investigation of meta-heuristics for the multi-mode resource-constrained project scheduling on new dataset instances

Vincent Van Peteghem, Mario Vanhoucke

4 - Audit-staff scheduling with alternative audit teams and setup times

Vincent Van Peteghem, Mario Vanhoucke

■ MF-09

Monday, 17:20-18:40

6.2.53

Discrete and Continuous Optimization for Gas Networks

Chair: *Armin Fügenschuh*

1 - Checking feasibility in stationary models of gas transportation

Claudia Stangl, Rüdiger Schultz

2 - High accuracy stationary optimization in gas networks

Martin Schmidt, Marc Steinbach, Bernhard Willert

3 - Topology planning in gas distribution networks

Jesco Humpola, Armin Fügenschuh, Thomas Lehmann, Jacint Szabo

■ MF-10

Monday, 17:20-18:40

6.2.56

Multi-index Assignment Problems

Chair: *Frits Spieksma*

1 - On the completability of incomplete latin squares

Reinhardt Euler

2 - On the multi-level bottleneck assignment problem

Trivikram Dokka, Frits Spieksma, Gautam Appa, Anastasia Kouvela

3 - Characterising odd-hole inequalities related to latin squares

Yiannis Mourtos, Dimitris Magos

4 - The focus of attention problem

Frits Spieksma, Dries Goossens, Sergey Polyakovskiy, Gerhard J. Woeginger

■ MF-11

Monday, 17:20-18:40

8.2.38

Structural Equation Modelling Approach in User Acceptance of Information Technology I

Chair: *Sevgi Ozkan*

1 - Analysis of the user acceptance for implementing iso/iec 27001:2005 in Turkish public organizations

Tolga Mataracioglu, Sevgi Ozkan

2 - Information technology assessment of organizations

Emre Sezgin, Sevgi Ozkan

3 - Investigating technology acceptance model in context of mobile health care

Can Peker, Sevcen Yazarli, Sevgi Ozkan

4 - Analysis of the possible adoption behaviors of cloud services in Turkish public organizations

Bilge Karabacak, Sevgi Ozkan

■ MF-12

Monday, 17:20-18:40

8.2.39

AHP 05

Chair: *Josef Jablonsky*

1 - Influence of the criteria in the Bayesian AHP

Pilar Gargallo, José María Moreno-jimenez, Alfredo Altuzarra, Manuel Salvador

2 - Multiple criteria decision making in management accounting and control — state of the art and research perspectives

Judith Huelle, Ralf Kaspar, Klaus Moeller, Tobias Klatt

3 - Analysis of investments in alternate energy resources: AHP and DEA approach

Josef Jablonsky

■ MF-13

Monday, 17:20-18:40

2.2.21

Discrete Location II

Chair: *Antonio Manuel Rodríguez-Chía*

1 - Solving discrete location problems by neural networks

Enrique Dominguez, Jose Muñoz

2 - Facility location planning for a multi-layer biofuel production chain

Frank Schwaderer, Magnus Fröhling, Frank Schultmann

3 - Solving the the uncapacitated hub location problem with a row generation algorithm

Sergio García Quiles, Mercedes Landete, Alfredo Marín

■ MF-14

Monday, 17:20-18:40

2.2.15

Supply Chain Planning

Chair: *Shabnam Rezapour*

1 - The effect of workload constraints in periodic order release models

Michiel Jansen, Ivo Adan

2 - A critical analysis of optimisation models for "clicks-and-mortar" integration

Kathrin Fischer

3 - Strategic design of competing supply chain network for markets with stochastic demands

Shabnam Rezapour, Reza Zanjirani Farahani

■ MF-15

Monday, 17:20-18:40

2.2.12

Shortest Path Problems with Resource Constraints

Chair: *Simon Spoorendonk*

1 - Resource constrained shortest path found by parallel labeling algorithm

Bjørn Petersen

2 - A new state space relaxation for computing bounds to routing problems

Roberto Roberti, Roberto Baldacci, Aristide Mingozzi

3 - Pricing non-elementary routes for the capacitated arc-routing problem

Stefan Irnich

4 - A branch-and-cut algorithm for the elementary shortest path problem with resource constraints

Simon Spoorendonk

■ MF-16

Monday, 17:20-18:40

2.2.14

Vehicle and crew rostering

Chair: *Ana Paias*

Chair: *Marta Mesquita*

1 - The integrated vehicle-crew-roster problem with days-off pattern

Marta Mesquita, Margarida Moz, Ana Paias, Margarida Pato

2 - Robust airline schedule planning: minimising propagated delay in an integrated routing and crewing framework

Gary Froyland

3 - Heuristic for multiple trips vehicle routing and scheduling problem with time window

San Nah Sze, Suk Fung Ng

4 - A maximum covering formulation for the integrated vehicle and crew scheduling problem

Teresa Galvão Dias, Jorge Pinho de Sousa, Bruno Prata

■ MF-17

Monday, 17:20-18:40

1.3.14

Long-term Transportation Planning

Chair: *Rajeev Namboothiri*

1 - A comprehensive evaluation of the impact of aggregation/disaggregation of data on the strategic planning of freight transportation systems

Rajeev Namboothiri, Teodor Gabriel Crainic, Michel Gendreau, Alexandre Savariradjou

2 - The influence of subcontracting on location decisions of small package shippers

Andreas Stenger, Michael Schneider, Michael Schwind

3 - Integrated facility location and multi-trip vehicle routing problem: solution and value of integration

Zeliha Akca, Rosemary Berger, Ted Ralphs

■ MF-18

Monday, 17:20-18:40

1.3.15

Markov Chains

Chair: Erik Kropat

Chair: Zeev (Vladimir) Volkovich

Chair: Gerhard-Wilhelm Weber

1 - absorbent chains of markov: study of costs

Silvana Ligia Vincenzi Bortolotti, Rosely Antunes de Souza, Afonso Farias Sousa Junior, Antônio Coelho

2 - Hamiltonicity-trace conjecture for singularly perturbed Markov chains

Vladimir Ejov, Nelly Litvak, Giang Nguyen, Peter Taylor

3 - Modelling operational decisions in start-up firms

Thomas Archibald, Kuangyi Liu

4 - Prospective customer equity measurement and monitoring

Nadine Losch, Klaus Moeller

■ MF-19

Monday, 17:20-18:40

1.3.20

Game Theory and Statistics

Chair: *Alberto Pinto*

Chair: *Gerhard-Wilhelm Weber*

1 - Reliability of test score

Mikhail Lutsenko

2 - Smed: statistical analysis of setup time reduction in plastic injection machines

Helena Alvelos, Telmo Correia, Ana Raquel Xambre

3 - Statistical analysis of public and national accounts related with expenses of previous years

Paula Santos, Manuela Sarmento

■ MF-20

Monday, 17:20-18:40

1.3.33A

Cutting and Packing 5

Chair: *Pedro Castro*

1 - An exact approach for the 1d contiguous bin packing problem

Marat Mesyagutov, Guntram Scheithauer, Gleb Belov

2 - Codifications in evolutionary algorithms for the multi-objective 2d guillotine strip packing problem

Jesica de Armas, Gara Miranda, Coromoto Leon

3 - An improvement of the best-fit heuristic for 2d strip packing problem

Miroslav Rada

4 - New MILP model for the 2d strip packing problem

Pedro Castro, Jose Fernando Oliveira

■ MF-21

Monday, 17:20-18:40

6.2.47

Optimization Modeling III

Chair: *David Canca*

1 - Management of loading operations in the cement industry

Tuomo Takkula

2 - A diet planning model for Malaysian boarding school using integer programming

Suliadi Firdaus Sufahani

3 - Diet scheduling-a means to aid rural health care

Sanchita Jha, Suraj Agarwal, Rishil Murukan Mypalli, Vinu Agrawal

4 - A mixed integer programming model applied to the optimization of cleaning procedures in a sunlight collector field.

David Canca, Pedro L. Gonzalez-R, Gabriel Villa

■ MF-22

Monday, 17:20-18:40

3.1.10

Quantitative Health Care Policy Decision Making

Chair: *Marion Rauner*

- 1 - Disaster planning for ambulance services: a training tool using des**
Marion Rauner, Helmut Niessner
- 2 - Hospital productivity and technical progress across austrian public hospitals**
Margit Sommersguter-Reichmann, Adolf Stepan, Mex Glawischnig
- 3 - Estimating the impact of stochasticity in operating theatres**
Jean-Sébastien Tancrez, Benoît Roland, Jean-Philippe Cordier, Fouad Riane

■ MF-23

Monday, 17:20-18:40

6.2.49

MOO: Network Territorial Partition Problems

Chair: *José Rui Figueira*

1 - Models for the integration of MCDA and gis: usage and weaknesses

Karim Lidouh, Esteban Zimányi, Yves De Smet

2 - Aggregating census units with a multi-objective genetic algorithm: preliminary results of a case study in canada

Dilip Datta, José Rui Figueira, Jacek Malczewisk

3 - Graph partitioning by a real-coded multi-objective genetic algorithm

José Rui Figueira, Dilip Datta

■ MF-24

Monday, 17:20-18:40

6.2.50

Natural Computation in BioInformatics

Chair: *Mario Pavone*

1 - Metabolic p models for biological phenomena

Giuditta Franco, Vincenzo Manca

2 - A formal framework of computational modeling for ecosystems based on membrane computing

M. Angels Colomer, Antoni Margalida, Ignacio Pérez-Hurtado, Mario J. Pérez-Jiménez

3 - Optimization algorithms for the protein structure prediction problem

Mario Pavone, Giuseppe Nicosia, Vincenzo Cutello

4 - Bio-inspired reverse engineering methodologies to infer the gene regulatory networks

Mario Pavone, Natalio Krasnogor

■ MF-25

Monday, 17:20-18:40

6.2.48

Financial Risk Management

Chair: *Gerhard-Wilhelm Weber*

Chair: *Apostolos Fertis*

1 - Robust risk management

Apostolos Fertis

2 - Australian electricity market and price volatility

Ghazaleh Mohammadian, Jerzy Filar, Asef Nazari

3 - Forecasting stock index realized volatility with an asymmetric har-figarch model: the case of s&p 500 and djia stock indices

Dimitrios Louzis, Spyros Xanthopoulos, Apostolos Refenes

4 - Dual representation of choice and aspirational preferences

David Brown, Melvyn Sim, Enrico De Giorgi

■ MF-26

Monday, 17:20-18:40

3.1.11

Neural Network Applications

Chair: *Sureyya Ozogur-Akyuz*

Chair: *Gurkan Ozturk*

1 - Performances of the ann, svm, and k-means clustering methods for recognizing different environmental sounds

Inci Saricicek, Buket Barkana, Burak Uz Kent

2 - Optimization of the automatic manipulator trajectory using stochastic algorithm and neural networks

Alina Fedosova

3 - Paraconsistent artificial neural network — pann and eeg analysis

Jair Minoro Abe, Fábio Romeu de Carvalho

4 - Estimating correlated constraint boundaries from timeseries data: the multi-dimensional german tank problem

Abhilasha Aswal, G. N. Srinivasa Prasanna, Sheela Siddappa

■ MF-28

Monday, 17:20-18:40

8.2.10

Stochastic Programming - General Methodology

Chair: *Martin Branda*

1 - Line-search with variable-number sample size

Natasa Krklec, Natasa Krejic, Katarina Vla

2 - Reformulation of general chance constrained problems using the penalty functions

Martin Branda

3 - Some recent results in stochastic gradient estimation

Michael Fu

■ MF-29

Monday, 17:20-18:40

8.2.11

Boolean methods in system analysis, learning and circuit synthesis

Chair: *Tiziano Villa*

1 - Symbolic model checking of boolean models in biology

Arlindo Oliveira

2 - Boolean machine learning as a tool for model inference from data

Diego Liberati

3 - An efficient heuristic approach to solve the unate covering problem

Fabrizio Ferrandi

4 - Boolean functions in cryptography

Enes Pasalic

■ MF-30

Monday, 17:20-18:40

8.2.13

New issues in aggregation-disaggregation philosophies

Chair: *Evangelos Grigoroudis*

Chair: *Yannis Siskos*

1 - A dss for robustness analysis in multicriteria satisfaction evaluation

Nikos Tsotsolas, Yannis Siskos

2 - Extensions of the musa method: modeling additional preferences

Evangelos Grigoroudis, Yannis Siskos

3 - Multi-attribute utility theory without preference independence — conception of a real multiplicative preference elicitation and aggregation method.

Johannes Siebert

■ MF-32

Monday, 17:20-18:40

8.2.17

OR in Animal Production

Chair: *Anders Ringgaard Kristensen*

1 - Optimization of heifer rearing strategy in polish beef herds

Anna Stygar, Anders Ringgaard Kristensen, Joanna M. Makulska

2 - A multistage stochastic programming model for planning piglet production

Lluís M Pla, Sara Verónica Rodríguez-Sánchez, Victor Albornoz

3 - Optimization of reproduction and production cycles for high yielding dairy cows

Joanna M. Makulska, Andrzej Węglarz, Anna Stygar, Barbara Tombarkiewicz

4 - Replacement policies for dairy cows

Lars Relund Nielsen, Anders Ringgaard Kristensen, Erik Jørgensen

■ MF-33

Monday, 17:20-18:40

8.2.19

Environmental Management II

Chair: *Christos Ioakimidis*

1 - The effect of environmental uncertainty on operations priorities and business performance

Ahmed Attia

2 - Integrating environmental considerations into the supplier selection criteria

Ceyda ?en, Mercan Ozturk, Özge Nalan Alp

3 - Airline service network design for economic and ecologic sustainability

Amir José Daou Pulido, Cornelia Schoen

4 - Enhancing electric energy management decisions with an energy box

Luis Oliveira, Christos Ioakimidis, Paulo Ferrao

■ MF-34

Monday, 17:20-18:40

8.2.23

Model Formulations and Real World Applications of Lot Sizing and Scheduling II

Chair: *Reinaldo Morabito*

1 - A production scheduling problem on an aerospace assembly fixture

Horacio Yanasse, Bruno Silva, Reinaldo Morabito

2 - A hybrid general lot-sizing and scheduling formulation for a production process with a two-stage product structure

Sandra Transchel, Stefan Minner, Josef Kallrath, Nils Löhdorf

3 - Apply local branching to solve lot sizing problems

Renato Paiva, Franklina Toledo

■ MF-35

Monday, 17:20-18:40

6.2.46

Facilitated Decision Analysis I

Chair: *Gilberto Montibeller*

1 - Structuring multicriteria approaches to developing country problems

Theodor Stewart

2 - A multi-stage, multicriteria framework to support facilitation, problem structuring and choice in outsourcing and supplier selection

Miloslaw Fink, Valerie Belton, Marino Widmer

3 - Building decision support systems with facilitated modelling

Gilberto Montibeller, L. Alberto Franco, Victor Del Rio Vilas

4 - Facilitated logistics analysis: a decision support tool for locating logistic facilities with optimisation and multi-criteria value analysis

Hugo Yoshizaki, Gilberto Montibeller

■ MF-36

Monday, 17:20-18:40

3.1.05

Fuzzy Optimization and Decision Analysis 1

Chair: *Jaroslav Ramik*

Chair: *Josef Vicha*

1 - Multiple criteria academic staff evaluation models

Jana Talasova, Jan Stoklasa

2 - Fuzzy models of decision making as a research tool in architecture

Zuzana Talasova

3 - Fuzzified choquet integral in multiple criteria evaluation models

Iveta Bebcakova, Jana Talasova

4 - Dual optimization problems with generalized relational inequality constraints

Karel Zimmermann, Martin Gavalec

■ MF-37

Monday, 17:20-18:40

3.1.09

OR for Development and Developing Countries II

Chair: *Honora Smith*

Chair: *Gerhard-Wilhelm Weber*

1 - Recent trend of world productivity growth: a stochastic frontier application

Sangho Kim

2 - Export functions analysis. czech republic and eu.

Žárka Krkosková, Adéla Rázková

3 - Development of logistic centers in Poland

Iwona Otolá

4 - Supplier selection in supply chain management of accommodation enterprises (a research in the hotels of turkey)

Mehmet Sarioglan, Cevdet Avcikurt, Murat Doğudbay

■ MF-39

Monday, 17:20-18:40

6.2.45

Limit Behaviour and Approximations I

Chair: *Vladimir Veliov*

1 - Optimization methods for optimal control problems with control and point-wise state constraints

Ion Chrysoverghi, John Coletsos, Basil Kokkinis

2 - High-order approximations in optimal control

Vladimir Veliov

3 - Euler approximation of linear-quadratic control problems with bang-bang solutions

Walter Alt, Robert Baier, Matthias Gerds

■ MF-40

Monday, 17:20-18:40

6.2.52

Telecommunications

Chair: *Andras Farago*

1 - Suboptimal solutions to team optimization problems with statistical information structure

Marcello Sanguineti, Mauro Gaggero, Giorgio Gnecco

2 - On call admission control with nonlinearly constrained feasibility regions

Giorgio Gnecco, Marco Cello, Mario Marchese, Marcello Sanguineti

3 - Evaluating downside risks in reliable networks

Megha Sharma, Diptesh Ghosh

4 - The multigraph advantage and its application in network analysis

Andras Farago, Dung Trung Tran

■ MF-41

Monday, 17:20-18:40

3.1.06

Pricing in networks

Chair: *Bernard Fortz*

Chair: *Houyuan Jiang*

1 - A column generation approach for a bilevel pricing problem

Aurélie Casier, Martine Labbé, Bernard Fortz

2 - Optimisation of forecourt fuel pricing

David McCaffrey, Barbara Jenkins, Tom Liptrot

■ MF-42

Monday, 17:20-18:40

3.1.07

Optimization and Data Mining I

Chair: *Emilio Carrizosa*

1 - Support vector machine for time series regression

Renato De Leone

2 - Application of svm in the classification of ship of acoustic signals using frequency and rpm data

Mikey da Silva Neto, Moacyr Machado Cardoso Junior, Rodrigo Scarpel

3 - An online monitoring procedure using support vector regression

Seong-Jun Kim, Inyong Seo, Sungho Choi

■ MF-43

Monday, 17:20-18:40

8.2.02

Revenue Management I

Chair: *Alf Kimms*

1 - A dynamic programming decomposition for revenue management with substitution

Jochen Goensch, Claudius Steinhardt

2 - Capacity control with planned upgrades in the car rental industry

Claudius Steinhardt, Jochen Goensch

3 - Examples illustrating the importance of integrating revenue management and supply chain decision making.

Peter Bell

4 - Nucleolus based revenue sharing in airline alliances

Alf Kimms, Demet Cetiner

■ MF-44

Monday, 17:20-18:40

8.2.03

SD modelling of Scarcity and Sustainable Development

Chair: *Erik Pruyt*

- 1 - Scarcity of minerals and metals: making sense of generic and specific exploratory system dynamics models**

Erik Pruyt

- 2 - Scarcity of minerals and metals: an application of exploratory modelling and analysis**

Caner Hamarat, Erik Pruyt

- 3 - System dynamics modeling for the urmia saline lake management**

Mahdi Zarghami, Elmira Hassanzadeh, Yousef Hassanzadeh

■ MF-45

Monday, 17:20-18:40

8.2.12

Recent developments from Nonconvex Programming

Chair: *Tao Pham Dinh*

1 - New dc programming approaches for bmi and qmi feasibility problems

Yi-Shuai Niu, Tao Pham Dinh

2 - Siting and sizing of facilities under probabilistic demands

Luís Fernandes, Joaquim Judice, Hanif Sherali, Antonio Antunes

3 - A new approach for solving value-at-risk constrained optimization using the dc programming and dc algorithm (dca)

Manh Nguyen Duc, Hoai An Le Thi, Tao Pham Dinh

■ MF-46

Monday, 17:20-18:40

8.2.14

Semi-Infinite Optimization II

Chair: *Shunsuke Hayashi*

1 - Polyhedral cells of a voronoi diagram

Ina Voigt, Stephan Weis

2 - Optimality conditions and regularized explicit exchange method for convex semi-infinite programs with infinitely many conic constraints

Shunsuke Hayashi, Takayuki Okuno, Masao Fukushima

3 - Semi-infinite optimization of probe placement in radiofrequency ablation

Sabrina Haase, Anton Winterfeld, Tobias Preusser, Karl-Heinz Küfer

■ MF-47

Monday, 17:20-18:40

8.2.16

Advances in Discrete-Continuous Optimal Control 1

Chair: Gerhard-Wilhelm Weber

Chair: Dmitrii Lozovanu

1 - Regularity conditions in discrete optimal control problems

Boban Marinkovic

2 - Solving discretized degenerate optimal control problems with state constraints

Catarina Avelino

■ MF-48

Monday, 17:20-18:40

8.2.04

OR/MS: Beyond Mathematics I

Chair: *Heiner Müller-Merbach*

1 - A.k. erlang — my distinguished relative

Jakob Krarup

2 - Or/ms — beyond mathematics

Heiner Müller-Merbach

3 - Estimating business and management journal quality from the 2008 research assessment exercise in the UK

John Mingers, Maria Paola Scaparra

■ TA-01

Tuesday, 9:00-10:20

Aula Magna

Keynote Talk 5

Chair: *Jose Fernando Oliveira*

1 - You want them to remember? then make it memorable!

James Cochran

■ TA-02

Tuesday, 9:00-10:20

3.2.14

Advanced Combinatorial Optimization 2

Chair: *Aristide Mingozzi*

1 - Theoretical investigations on maximal dual feasible functions

J. M. Valério de Carvalho, Jürgen Rietz, Cláudio Alves

2 - Monoidal cut strengthening revisited

Andrea Qualizza, Egon Balas

3 - Models and algorithms for multi-echelon distribution networks

Roberto Wolfler-Calvo, Aristide Mingozzi, Roberto Baldacci

4 - Reference point based solution approach for the resources constrained shortest path problem

Luigi Di Puglia Pugliese, Francesca Guerriero

■ TA-04

Tuesday, 9:00-10:20

3.2.13

Project scheduling

Chair: *André Rossi*

Chair: *José Carlos Reston Filho*

1 - Towards the minimization of project duration and cost in stochastic project management environments

José Carlos Reston Filho, Anabela Pereira Tereso, Lino Costa

2 - An electromagnetism-like algorithm for a project scheduling problem with discounted cash flows

Marisa Toste, Dalila Fontes

3 - Modeling project resource scheduling problem with activity compressibility

M. Karimi-Nasab, B. Shah-Hoseini

■ TA-05

Tuesday, 9:00-10:20

3.2.16

EURO Excellent in Practice Award 2010

Chair: *M. Grazia Speranza*

1 - Billerud optimizes its bleaching process using online optimization

Mikael Rönnqvist, Patrik Flisberg, Stefan Nilsson

2 - Game theory for security: lessons learned from deployed applications

Milind Tambe, Fernando Ordonez, Manish Jain, Christopher Kiekintveld, Jason Tsai, Shyamsunder Rathi, James PIta

3 - Catch-up scheduling for childhood vaccination

Pinar Keskinocak, Faramroze Engineer, Larry Pickering

■ TA-06

Tuesday, 9:00-10:20

8.2.30

DEA Methodology VI

Chair: *Giannis Karagiannis*

- 1 - The Malmquist productivity index and its decomposition for radial DEA models with single constant input**

Giannis Karagiannis

- 2 - A slack-based measure for measuring the efficiency of decision-making unit with negative data, using DEA**

Fuh-Hwa Liu, Ling-Chuan Tsai

- 3 - Technical economies of scope using data envelopment analysis**

Ozren Despic, Konstantinos Bakoulas, Emmanuel Thanassoulis

- 4 - Data envelopment analysis software for the advanced users**

Ali Emrouznejad, Emmanuel Thanassoulis

■ TA-07

Tuesday, 9:00-10:20

8.2.47

DEA Application X

Chair: *Luis C. Dias*

1 - Efficiency changes in Turkish airports for the period 2006-2009

Erhan Berk, Diyar Akay

2 - Benchmarking university libraries: the influence of different environments

Gerhard Reichmann, Margit Sommersguter-Reichmann

3 - Chance-constrained fdh model by genetic algorithm in uncertain environment

Hiroshi Morita

4 - Discriminating efficient units using l1 norm fdh

Shinn Sun

■ TA-08

Tuesday, 9:00-10:20

6.1.36

Project Scheduling: New Results and Applications

Chair: *Jenny Nossack*

1 - Multi-project scheduling with 2-stage decomposition

Gündüz Ulusoy, An?l Can

2 - A constraint integer programming approach for resource-constrained project scheduling

Stefan Heinz, Timo Berthold, Marco Lübbecke, Rolf Möhring, Jens Schulz

3 - Improving a make-to-order production process using resource-constrained project scheduling

Wolfgang Summerauer, Christian Almeder,

4 - Decision support system for continuous production

Krystina Bakhrankova

■ TA-09

Tuesday, 9:00-10:20

6.2.53

Mathematical Modeling on Timetabling Problems: Models and Analytic Network Process Approach

Chair: *Mujgan Sagir*

- 1 - Exam scheduling: parameter estimation with the ANP and mathematical modeling on the solution**

Mujgan Sagir, Zehra Kamisli Ozturk

- 2 - A genetic algorithm for course scheduling problem**

Zehra Kamisli Ozturk, Mujgan Sagir

- 3 - Vehicle routing problem: an application study**

Ediz Atmaca

- 4 - A solution approach for staff scheduling in service systems**

Burcin Ozsoydan, Aydin Sipahioglu

■ TA-10

Tuesday, 9:00-10:20

6.2.56

Graphs and Networks VI

Chair: *Marc Demange*

1 - A family of torus grids that are g-graphs

Cerasela Tanasescu, Alain Bretto

2 - On inverse matching problems

Marc Demange, Laurent Alfandari, Jerome Monnot

■ TA-12

Tuesday, 9:00-10:20

8.2.39

ANP 01

Chair: *Birsen Karpak*

1 - Prioritizing the criteria in renewable energy pricing

Mehmet Yalçın Altunta?, Gulgun Kayakutlu

2 - Access of green supply chain management for smes

Irem Duzdar, Gulgun Kayakutlu

3 - Success factors of for a manufacturing SME in ohio: women perspective

Birsen Karpak, Anne M. McMahon

■ TA-13

Tuesday, 9:00-10:20

2.2.21

Continuous Location I

Chair: *Emilio Carrizosa*

1 - Line location with restrictions on the slope of the line

Thorsten Krempasky, Anita Schoebel

2 - Hybrid methods for solving location-allocation problems with dense demand

Alper Murat, Vedat Verter, Gilbert Laporte

3 - Dcm optimization in continuous location

Rafael Blanquero, Lenys Bello, Emilio Carrizosa, Eligius M.T. Hendrix

4 - Robust solutions for location problems with uncertainties

Kathrin Klamroth, Markus Kaiser

■ TA-14

Tuesday, 9:00-10:20

2.2.15

Closed-Loop Supply Chains

Chair: *Aysegul Demir*

1 - Inventory management in closed-loop supply chains under non-stationary demand

Ratna Babu Chinnam, Ibrahim Dogan

2 - Coordination and uncertainty in closed loop supply chains

Juan Pedro Sepúlveda, Felipe Baesler

3 - Pricing and production decisions in reusable container systems

Busra Atamer, Ismail Serdar Bakal, Z. Pelin Bayindir

4 - On the value of radio frequency identification (rfid) technology for managing pools of returnable transport items (rtis)

Aysegul Demir, Simme Douwe Flapper, Sedef Meral

■ TA-15

Tuesday, 9:00-10:20

2.2.12

Vehicle Routing Problems with Pickups and Deliveries

Chair: *Gunes Erdogan*

1 - An optimization model for the vehicle routing problem with multiple container load

Massimo Di Francesco, Teodor Gabriel Crainic, Paola Zuddas

2 - Optimization of batteries distribution and route planning with pickups and deliveries

Sónia Cardoso, Ana Paula Barbósa-Póvoa

3 - The traveling salesman problem with pickups, deliveries and handling costs

Daniele Vigo, Maria Battarra, Gunes Erdogan, Gilbert Laporte

4 - A branch-and-cut algorithm for the non-preemptive capacitated swapping problem

Gunes Erdogan, Jean-Francois Cordeau, Gilbert Laporte

■ TA-16

Tuesday, 9:00-10:20

2.2.14

OR models and algorithms

Chair: *Federico Perea*

1 - A customer oriented model for public transportation timetables

Miguel Angel Pozo, Francisco A. Ortega

2 - Demand based railway timetables, capacity and quality of service.

David Canca, Alejandro Zarzo, Gabriel Villa, Encarnación Algaba

3 - Exact algorithms for location routing problems

Claudio Contardo

4 - Wardrop equilibria with risk averse users

Fernando Ordonez, Nicolas Stier-Moses

■ TA-17

Tuesday, 9:00-10:20

1.3.14

Contracts and Sub-contracting for Transportation

Chair: *Melanie Bloos*

1 - A web platform for effective planning of green combined transportation in EU

Vasileios Zeimpekis, Dimitrios Saliaris, Konstaninos Mamasis, Ioannis Minis

2 - Solving a milk collection and delivery problem

Nadia Lahrichi, Teodor Gabriel Crainic, Michel Gendreau, Walter Rei, Louis-Martin Rousseau

■ TA-18

Tuesday, 9:00-10:20

1.3.15

Supply Chain Management

Chair: *Erik Kropat*

Chair: *Zeev (Vladimir) Volkovich*

Chair: *Gerhard-Wilhelm Weber*

1 - An application of the revised weighting method in vendor selection with price breaks

Tunjo Peri?, Zoran Babic

2 - Interaction analysis of participants in supply chains

Ivana Kovacevic, Biljana Panic

3 - Simulation of supply chain dynamic behaviour by means of discrete event tools

Christos Papanagnou, Panagiotis Tzionas

4 - Strategic cost management and supply chain management: lessons from a case study

Manuel Nunes, Paulo Afonso

■ TA-19

Tuesday, 9:00-10:20

1.3.20

Economical Models

Chair: *Alberto Pinto*

Chair: *José Martins*

1 - Adaptive forecasting methods for time series with complex trend patterns

Vitor Mendonca, Antonio Rodrigues

2 - An economic analysis of biofuels production, processing, and distribution in the us

Hayri Önal

3 - Mathematical modeling for sugarcane residual biomass exploitation

Helenice Florentino

4 - A duopoly collusion, dumping and Cournot comparison

José Martins, Alberto A. Pinto

■ TA-20

Tuesday, 9:00-10:20

1.3.33A

Cutting and Packing 6

Chair: *José Fernando Gonçalves*

- 1 - A parallel multi-population genetic algorithm for a constrained two-dimensional orthogonal packing problem**

José Fernando Gonçalves

- 2 - An efficient algorithm for enumerating bottom-left stable positions and its applications**

Shinji Imahori, Yuyao Chien, Yuma Tanaka, Mutsunori Yagiura

- 3 - A combined cutting stock and lot-sizing problem**

Elsa Silva, Filipe Alvelos, J. M. Valério de Carvalho

- 4 - Two-dimensional cutting stock management in fabric industries and optimizing the large object's length**

Shaghayegh Rezaei, Mahdi Shadaloee

■ TA-21

Tuesday, 9:00-10:20

6.2.47

Optimization Modeling IV

Chair: *Manuel Soler Arnedo*

1 - Nonlinear optimization in a thermo-economic analysis of a small cogeneration system

Ana Ferreira, Celina Pinto Leão, Manuel Nunes, Senhorinha Teixeira, Luís B. Martins

2 - A minlp model for the hydro scheduling of an electricity producer

Javier Diaz

3 - Billiards games: an optimization approach

Jean-François Landry, Jean-Pierre Dussault, Philippe Mahey

4 - Hybrid optimal control for commercial aircraft trajectory shaping

Ernesto Staffetti, Manuel Soler Arnedo, Alberto Olivares

■ TA-22

Tuesday, 9:00-10:20

3.1.10

Health Care Scheduling I

Chair: *Tugba Cayirli*

1 - Optimization of daily scheduling for extramural health care services

Andrea Trautsamwieser, Patrick Hirsch

2 - A universal appointment rule for a single-server system with walk-ins & no-shows

Tugba Cayirli, Kum-Khiong Yang, Ser Aik Quek

3 - Metaheuristic solutions for the or planning and scheduling problem

Paolo Landa, Elena Tanfani, Angela Testi, Roberto Aringhieri, Patrick Soriano

■ TA-23

Tuesday, 9:00-10:20

6.2.49

MOO: Scheduling Problems

Chair: *Jacques Teghem*

Chair: *Taicir Loukil*

1 - A bicriteria flowshop problem with time lags

Emna Dhouib, Jacques Teghem, Daniel Tuyttens, Taicir Loukil

2 - A bi-objective approach for rescheduling a flowshop

Jacques Teghem

3 - Benchmark generators for reactive multi-mode project scheduling problem after a mode modification

Sonda Elloumi, Philippe Fortemps, Taicir Loukil

4 - Bi-criteria thermal-energy production scheduling, using genetic algorithms

Dalila Fontes, Luís Roque, Fernando A. C. C. Fontes

■ TA-24

Tuesday, 9:00-10:20

6.2.50

Applications of OR in Life Science Informatics

Chair: *Erfan Younesi*

- 1 - **A temporal logic constraint solving approach to model coupling: case study on the effects of irinotecan injections on the mammalian cell cycle**

Elisabetta De Maria

- 2 - **Gene network analysis: identifying causal relationships**

Jörg Zimmermann

- 3 - **Detecting early breast cancer with artificial immune recognition systems**

Christos Katsis, I. Gogkou, Christos Papadopoulos, Yorgos Goletsis, Giorgos Stylios

■ TA-25

Tuesday, 9:00-10:20

6.2.48

Risk Management and Portfolio Optimization I

Chair: *Azar Karimov*

Chair: *Gerhard-Wilhelm Weber*

1 - Optimal portfolio with annuity purchase

Tadashi Uratani, Takashi Kobayashi

2 - Do high-tech stock recommendations have investment value?

Chin-Tsai Lin, Yi-Hsien Wang, Fu-Ju Yang, Tung-Cheng Hu, Yi-Shan Chen

3 - Extreme value theory: a new tendency in market risk management?

Selena Totic, Milica Bulajic

■ TA-26

Tuesday, 9:00-10:20

3.1.11

Operation research games

Chair: *Gustavo Bergantinos*

1 - On monotonic rules in minimum cost spanning tree problems

Juan Vidal-Puga, Gustavo Bergantinos, Anirban Kar

2 - A generalization of obligation rules for minimum cost spanning tree problems

Gustavo Bergantinos, Leticia Lorenzo, Silvia Lorenzo-Freire

3 - An axiomatic approach in minimum cost spanning tree problems with groups

Gómez-Rúa María, Gustavo Bergantinos

4 - Linear production games with externalities

Manuel Alfredo Mosquera Rodríguez, Natividad Llorca, Joaquin Sánchez-Soriano

■ TA-27

Tuesday, 9:00-10:20

8.2.06

FREIGHT TRANSPORT AND LOGISTICS

Chair: *Katharina Grobleben*

1 - Customer agreement characteristics and their impact on rail freight productivity

Lars Backåker, Johanna Törnquist Krasemann

2 - The impact of the equal exchanges recovery strategy in closed-loop supply chains of returnable transport item (rti)

Ruth Carrasco-Gallego, Simme Douwe Flapper, Eva Ponce-Cueto

3 - Hybrid optimization/simulation approach to design the reverse logistics network of a 3pl

A. Cetin Suyabatmaz, F. Tevhide Altekin, Guvenc Sahin

4 - Towards a modal shift in European freight transportation

Katharina Grobleben

■ TA-28

Tuesday, 9:00-10:20

8.2.10

Stochastic Programming Models 1

Chair: *Nilay Noyan*

- 1 - A scenario tree approach to optimal pharmaceutical research and development portfolios using real option valuation method**

Majid Rafiee

- 2 - A stochastic two-period model in airline seats inventory control**

Patricia Xufre

- 3 - A stochastic programming approach for stochastic assembly line balancing with line stoppages**

F. Tevhide Altekin, Nilay Noyan, Selin Soner Kara

- 4 - Managing production in supply chain under uncertainty**

Yi-Shu Yang

■ TA-29

Tuesday, 9:00-10:20

8.2.11

Satisfiability: Structures and Complexities

Chair: *Stefan Porschen*

1 - The strength of parameterized resolution

Olaf Beyersdorff

2 - On random ordering constraints

Andreas Goerdt

3 - A constructive proof of the Lovász local lemma

Robin Moser

4 - Towards genetic theory of non-hamiltonicity: a study of mutants and their descendents.

Michael Haythorpe, Pouya Baniasadi, Vladimir Ejov, Jerzy Filar

■ TA-30

Tuesday, 9:00-10:20

8.2.13

MCDA II: Theoretical contributions

Chair: *Marc Pirlot*

1 - An empirical study of rank reversals in the promethee methods

Céline Verly, Yves De Smet

2 - On the bipolar-valued logical foundation of the classic outranking relation

Raymond Bisdorff

3 - Subjective expected utility on the basis of ordered categories

Denis Bouyssou, Thierry Marchant

4 - Evaluations of infinite utility streams: pareto-efficient and egalitarian axiomatics

María D. García-Sanz

■ TA-31

Tuesday, 9:00-10:20

8.2.15

OR and Ethics I

Chair: *Fred Wenstøp*

1 - From policy narratives to policy models

Giorgio Gallo, Roberto Burlando

2 - A decision framework for ethics

Cathal Brugha

3 - Janus faced moral mathematics, self-interest and emotions

Haavard Koppang, Fred Wenstøp

■ TA-32

Tuesday, 9:00-10:20

8.2.17

OR in Animal Science

Chair: *Lluis Miquel Pla*

1 - Dynamic model of red deer population size

Dominika Cywicka, Magdalena H?drzak

2 - Dynamic model of processes of hatching of chicken

Magdalena H?drzak, Marcin W. Lis, Barbara Tombarkiewicz, Krzysztof Pawlak, Jerzy W. Niedzió?ka

3 - Dynamic modelling of economic costs of foot and mouth disease (fmd) epidemics

Jarkko Niemi, Heikki Lehtonen, Tapani Lyytikäinen, Leena Sahlström, Terhi Virtanen

4 - Simulating the shift from marine netcages to inland recirculating aquaculture systems

Ilan Halachmi

■ TA-33

Tuesday, 9:00-10:20

8.2.19

Energy Pricing Models

Chair: *Mette Bjørndal*

1 - Renewable technologies, optimal generation mix and price volatility in competitive electricity markets

Irena Milstein, Asher Tishler

2 - Strategic bidding of gencos in competitive power market through q-learning algorithm

Hasan Rastegar, Masoud Rahmani

3 - Aggregation choices in zonal pricing algorithms for managing transmission congestion in electricity markets

Mette Bjørndal

■ TA-34

Tuesday, 9:00-10:20

8.2.23

Model Formulations and Real World Applications of Lot Sizing and Scheduling III

Chair: *Bernardo Almada-Lobo*

1 - A single-stage atsp-type model for lot sizing and sequencing in a beverage production process

Deisemara Ferreira, Alistair Clark, Bernardo Almada-Lobo, Reinaldo Morabito

2 - The block planning approach for lot-sizing and scheduling in make-and-pack production systems

Hans-Otto Guenther

3 - Flow shop production scheduling problem with compressible processing times

M.b. Aryanezhad, S. Talebi, M. Karimi-Nasab

■ TA-35

Tuesday, 9:00-10:20

6.2.46

Facilitated Decision Analysis II

Chair: *Gilberto Montibeller*

- 1 - Evaluating the use of scenarios and multi-criteria decision analysis (mcda) as a framework for decision-making under strategic uncertainty**

Camelia Ram, Gilberto Montibeller

- 2 - Proposal of use the multicriteria decision aid for improve the use of assessment tools with focus on performance indicators**

Edilson Giffhorn, Leonardo Ensslin, Sandra Ensslin, William Vianna

- 3 - Stimulating creative thinking with mcda: modelling the market space and exploring alternative perspectives**

Santiago Castro

■ TA-36

Tuesday, 9:00-10:20

3.1.05

Fuzzy Optimization and Decision Analysis 2

Chair: *Jaroslav Ramik*

Chair: *Josef Vácha*

1 - Fuzzy bi-matrix games — optimistic and pessimistic approach

Josef Vácha, Jaroslav Ramik

2 - Duality in fuzzy linear optimization

Milan Vlach, Jaroslav Ramik

3 - A fuzzy topsis methodology for the supplier selection problem

Shabnam Mojtahedzadeh Sarjami, Louis Caccetta

■ TA-37

Tuesday, 9:00-10:20

3.1.09

Mathematical models for energy and environment

Chair: *Edi Assoumou*

1 - Etsap modeling tools: a bottom-up framework for energy issues

Edi Assoumou, Gilles Guerassimoff, Sandrine Selosse, Nadia Maïzi

2 - Mescalito : a simplified approach for global long term energy scenarios

Francois Cattier, Jerome Wirth

3 - Decision-helping tools for long term investment in energy storage systems

Nicolas Omont, Florent Cadoux, Nicolas Bonnard, Arnaud Renaud

4 - Comparison of statistical and engineering models to simulate long-term behavioural changes

Jean-Michel Cayla, Benoit Allibe

■ TA-38

Tuesday, 9:00-10:20

6.2.44

Rating and Valuation of Credits

Chair: *Gerhard-Wilhelm Weber*

Chair: *Ömür Ugur*

1 - Lotus-based segmentation in credit scoring

Katarzyna Bijak

2 - Quantitative analysis on Japanese corporate ratings with artificial neural network?

Katsuaki Tanaka, Hideki Katsuda, Motohiro Hagiwara, Susumu Saito

3 - Predictive abilities of credit spread curves to the industrial production in the united states

Petr Jablonsky

4 - Predictive value of different levels of information in credit scoring: cross-country comparison

Galina Andreeva

■ TA-39

Tuesday, 9:00-10:20

6.2.45

Limit Behaviour and Approximations II

Chair: *Vladimir Veliov*

1 - Infinite horizon optimal control problems - existence and applications

Sabine Pickenhain

2 - On hjb equations associated to the optimal control of dde's: regularity and optimal feedbacks

Salvatore Federico, Fausto Gozzi

■ TA-40

Tuesday, 9:00-10:20

6.2.52

Network design 3

Chair: *Bessaih Fawzi*

1 - Algorithm for designing survivable tdm networks with general failure scenarios

Pavel Skums, Yury Orlovich, Yufei Wang

2 - Lower bounds for the weight-constrained minimum spanning tree problem

Eulália Santos, Agostinho Agra, Adelaide Cerveira, Cristina Requejo

3 - Switch matrix validation design on the telecommunication satellites

Bessaih Fawzi, Philippe Michelon, Dominique Feillet

4 - Packing edge-disjoint cycles in graphs

Peter Recht

■ TA-41

Tuesday, 9:00-10:20

3.1.06

Methodological Aspects of System Dynamics Modeling

Chair: *Jim Duggan*

1 - Risk cost modeling for transportation infrastructure project investment

Steve Jang

2 - The interpretation of system dynamics models

Martin Rafferty

3 - Modelling healthcare processes with system dynamics and discrete event simulation: a critical realist perspective

Kristian Rotaru, Leonid Churilov, Andrew Flitman

4 - An integrated methodology for system dynamics and agent based simulation

Jim Duggan

■ TA-42

Tuesday, 9:00-10:20

3.1.07

Optimization and Data Mining II

Chair: *Roberto Santana*

Chair: *Concha Bielza*

1 - A kernel-based model for spectral clustering with pairwise constraints

Carlos Alzate, Johan Suykens

2 - Combining discrete svm and fixed cardinality warping distances for multi-variate time series classification

Carlotta Orsenigo, Carlo Vercellis

3 - Graphical reports for distribution problems

Jörn Grahl

4 - Data and graph mining algorithms in estimation of distribution algorithms applied to feature subset selection problems

Roberto Santana, Concha Bielza, Pedro Larrañaga

■ TA-43

Tuesday, 9:00-10:20

8.2.02

Revenue Management II

Chair: *Jochen Goensch*

1 - Performance measures in nested capacity allocation mechanisms

Behzad Samii

2 - Managing consumer price sensitivity

Sri Devi Duvvuri

3 - Optimal pricing policy for the recyclable short life-cycle products in a duopoly market

Hsiao-Fan Wang

4 - On retail assortment, pricing, and return policies

Alex Grasas, Aydin Alptekinoglu

■ TA-44

Tuesday, 9:00-10:20

8.2.03

Modelling energy systems

Chair: *Steven De Schepper*

Chair: *Jean-Pierre Brans*

1 - Using biodiesel in belgium

Steven De Schepper

2 - Using ev batteries for grid regulation — a system dynamics approach

Robert Hein, Stefan Spinler

3 - Improving the performance of a photovoltaic solar panel production line

Ana Raquel Xambre, João Nicolau, Ana Luísa Ramos, Helena Alvelos

4 - Characterisation and classification of energy systems models

Christos Ioakimidis, Paulo Ferrao

■ TA-45

Tuesday, 9:00-10:20

8.2.12

Nonconvex Programming approaches for Machine Learning and Data Mining

Chair: *Tao Pham Dinh*

1 - Sparse fisher discriminant analysis by exact penalty techniques in dc programming

Mamadou Thiao, Tao Pham Dinh, Hoai An Le Thi

2 - Rare event simulations applied to learn an optimal intelligence policy in a hierarchical context

Frédéric Dambreville, Francis Celeste, Fabienne Ealet

■ TA-46

Tuesday, 9:00-10:20

8.2.14

OR in Fisheries, Maritime Sciences and Related Aspects

Chair: *Pall Jensson*

Chair: *Gerhard-Wilhelm Weber*

- 1 - A stochastic optimization model for obtaining a total allowable catch quota in a multispecies Chilean fishery**

Victor Albornoz, Cristian Canales

- 2 - A nonlinear mixed-integer stochastic programming formulation for fish processed production planning**

Herman Mawengkang

- 3 - Optimal control path of bangladesh trawl shrimp fishery - a continuous time analysis**

Mohammed Khan

- 4 - A spatial resource allocation model for marine protected area (mpa) planning**

Yang-Chi Chang

■ TA-47

Tuesday, 9:00-10:20

8.2.16

Advances in Discrete-Continuous Optimal Control 2

Chair: *Gerhard-Wilhelm Weber*

Chair: *Dmitrii Lozovanu*

1 - Collective taxis in cities: a simulation tool for optimal real time operation and design

Jennie Lioris, Guy Cohen, Arnaud de La Fortelle

2 - Trade discounts and pass-through as control tools in a vertical distribution channel

Igor Bykadorov, Andrea Ellero, Elena Moretti

3 - Combined dynamic traffic assignment and optimal traffic control models

Evangelos Mitsakis

■ TA-48

Tuesday, 9:00-10:20

8.2.04

Heuristics 1

Chair: *Ana Maria A.C. Rocha*

1 - Packing rectangular items in convex regions: an heuristic minlp approach

Andrea Cassioli, Marco Locatelli

2 - Heuristics for qft loop shaping by evolutionary optimization

Joaquín Cervera, Alfonso Baños

3 - New concave penalty functions for improving the feasibility pump

Marianna De Santis, Stefano Lucidi, Francesco Rinaldi

4 - Heuristic strategies for optimal design of quality control tools

Vicent Giner-Bosch, Susana San Matias

■ TB-01

Tuesday, 10:40-12h00

Aula Magna

Keynote Talk 6

Chair: *Valerie Belton*

1 - Problem structuring methods 'in the dock'! : arguing the case for soft OR

Fran Ackermann

■ TB-02

Tuesday, 10:40-12h00

3.2.14

Advanced Combinatorial Optimization 3

Chair: *J. M. Valério de Carvalho*

1 - Exact integer programming in scip

Kati Wolter

2 - The inverse 1-median problem in the d-dimensional space with the chebyshev-norm

Johannes Hatzl

3 - Stabilization procedures based on dual feasible functions

Cláudio Alves, François Clautiaux, J. M. Valério de Carvalho, Jürgen Rietz

4 - Improving a lagrangean decomposition for the unconstrained binary quadratic programming problem

Luiz A. N. Lorena, Geraldo Mauri

■ TB-03

Tuesday, 10:40-12h00

3.2.15

Routing problems

Chair: *Jose Brandao*

Chair: *Elisabeth Gussmagg-Pfieggl*

1 - A hybrid approach for real world postman problems

Elisabeth Gussmagg-Pfieggl, Karl Doerner, , Stefan Irnich, Fabien Tricoire

2 - Iterated tabu search algorithm for the open vehicle routing problem with time windows

Jose Brandao

3 - A heuristic approach for the cvrp with open routes

R. Aykut Arapoglu, Abdurrahman Yildiz

4 - Multi-vehicle one-to-one pickup and delivery problem with split loads

Mustafa Sahin, Gizem Cavuslar, Temel Öncan, Guvenc Sahin, Dilek Tuzun Aksu

■ TB-04

Tuesday, 10:40-12h00

3.2.13

Multi-objective scheduling with metaheuristics

Chair: *Juan Carlos Rivera Agudelo*

Chair: *Farouk Yalaoui*

1 - L-ant to solve a multiobjective complex scheduling problem

Frédéric Dugardin, Farouk Yalaoui, Lionel Amodeo

2 - A genetic algorithm to solve the bi-objective resource-constrained project scheduling problem

Juan Carlos Rivera

3 - Genetic algorithm with parameter design and variable weighting to bicriteria open shop scheduling problems

Hong Tau Lee, Sheu-hua Chen

4 - Multiobjective simulation optimization for operating room scheduling

Felipe Baesler, Juan Pedro Sepúlveda

■ TB-05

Tuesday, 10:40-12h00

3.2.16

EURO Excellent in Practice Award 2010

Chair: *M. Grazia Speranza*

1 - Inventory management of multiple items with irregular demand: a case study

George Nenes, Sofia Panagiotidou, George Tagaras

2 - Modelling performance appraisal and career development in the European commission

Michael Pidd, Dave Worthington, Stephan Onggo, Didier Soopramanien

3 - Quantitative methods for a new configuration of territorial units in a Chilean government agency tender process

Guillermo Duran, Rafael Epstein, Cristian Martinez, Gonzalo Zamorano

■ TB-06

Tuesday, 10:40-12h00

8.2.30

DEA Application I - Banking

Chair: *Joseph Paradi*

1 - Efficiency analysis of the banks and insurance companies operating in Poland using the DEA method

Anna Matuszyk, Agnieszka K. Nowak

2 - A DEA incentive plan for branch managers

Yossi Hadad, Baruch Keren, Lea Fridman

3 - A study on profitability and marketability of taiwanese bank firms before and after the financial holding company act

Yi-Kang Chen, Dauw-Song Zhu, Yuang-sung Chen

4 - Bank branch human resource allocation efficiency using DEA — validated against real management

Joseph Paradi

■ TB-07

Tuesday, 10:40-12h00

8.2.47

DEA - General topics I

Chair: *Vania Sena*

1 - An assessment of international chain-owned hotels in taiwan using DEA

Hsiu-Feng Yong, Shinn Sun

2 - A productivity study on taiwanese pharmaceutical industry

Yan Chen Li, Shinn Sun

3 - A performance study on energy use of international tourism hotels in taiwan

Tz-Chiang Li, Shinn Sun

4 - A performance study on the public junior high schools in taipei county

Chin Fang Chien, Shinn Sun

■ TB-08

Tuesday, 10:40-12h00

6.1.36

Airport operations scheduling

Chair: *Florian Jaehn*

Chair: *Erwin Pesch*

1 - Integer solutions of ground holding models for air traffic

Kevin White, Jerzy Filar

2 - Optimization of runway utilization and communication complexity

Andrea Peter, Alexander Martin, Sebastian Pokutta

3 - A scheduling approach to allocate capacity efficiently at congested airports

Yiannis Salouras, Konstantinos Zografos, Michael Madas

4 - Aircrafts scheduling on ground: a case study

Ludovica Adacher, Marta Flamini

■ TB-09

Tuesday, 10:40-12h00

6.2.53

Recent Advances in the Theory of Mathematical Programming

Chair: *Sorin-Mihai Grad*

Chair: *Gerhard-Wilhelm Weber*

1 - On solving a problem of non-smooth function minimization over a convex set

Elena Morozova

2 - A cross entropy method for mixed integer programming

Ali Eshragh Jahromi, Asef Nazari, Jerzy Filar

3 - Large-scale decomposition with fejer processes for convex programming

Andrey Velichko

■ TB-10

Tuesday, 10:40-12h00

6.2.56

Graphs and Networks VII

Chair: *A. Ridha Mahjoub*

1 - Optimizing the edge-weight over vertex-induced bipartite subgraphs

Denis Cornaz, A. Ridha Mahjoub

2 - Structural analysis for differential-algebraic systems : formulation and facets.

Sébastien Martin, Mathieu Lacroix, A. Ridha Mahjoub

3 - Design of multilayer survivable optical networks

Raouia Taktak, Virginie Gabrel, A. Ridha Mahjoub

4 - Design of optical wdm networks

Amal Benhamiche, A. Ridha Mahjoub, Nancy Perrot

■ TB-11

Tuesday, 10:40-12h00

8.2.38

Advances in the Use of Information Technology I

Chair: *Sevgi Ozkan*

Chair: *Gerhard-Wilhelm Weber*

1 - Innovation projects realization using elements of information systems support

Biljana Stosic, Sonja Isljamovi?

2 - The impact of information sharing on system dynamics in a hybrid system with a pull-based remanufacturing process

Li Zhou

3 - Optimization of time-triggered communication protocols by means of resource constrained project scheduling with temporal constraints

Zdenek Hanzalek, Premysl Sucha

■ TB-12

Tuesday, 10:40-12h00

8.2.39

ANP 02

Chair: *Monica Garcia-Melon*

1 - Manufacturing systems performance evaluation using holonic architecture and the analytic network process (anp)

M Reza Abdi, Ashraf Labib

2 - An anp-based framework for revenue management

Petr Fiala

3 - Selection of a vineyard to produce a high quality wine using analytic network process

Monica Garcia-Melon, Pablo Aragonés-Beltrán, Alberto Escardino-Malva, Alfonso Porcar-Ramos, Santiago Leon-Rubio

4 - Prioritizing actions for local sustainable development with analytic network process

Monica Garcia-Melon, Jordi Peris-Blanes, Carola Calabuig-Tormo, Tomas Gomez-Navarro

■ TB-13

Tuesday, 10:40-12h00

2.2.21

Continuous Location II

Chair: *Emilio Carrizosa*

1 - Lower bounding approaches for the multi-commodity capacitated multi-facility Weber problem

Temel Öncan, Mehmet Hakan Akyüz, I. Kuban Altinel

2 - Upper bounding methods for the multi-commodity capacitated multi-facility Weber problem

Mehmet Hakan Akyüz, Temel Öncan, I. Kuban Altinel

3 - On the ordered anti-weber problem for any norm in r_2

Carlos Guerrero, Juan José Saameño, Jose Muñoz

4 - A continuous competitive facility location (and design) problem with variable demand

Pilar M. Ortigosa, Juana López-Redondo, Aranzazu Gila-Arrondo, Jose Fernandez, I. Garcia

■ TB-14

Tuesday, 10:40-12h00

2.2.15

Supply Chain Coordination

Chair: *Wenyih Lee*

- 1 - The application of co-opetition in the creation of supply contracts between haulage companies and 3pl companies**

Panagiotis Kyriazis, George Ioannou

- 2 - A collaborative decentralized distribution system with demand updates**

Ulas Ozen, Greys Sosic, Marco Slikker

- 3 - Buyback contracts in a dual channel environment**

Murat Kaya

- 4 - Coordinating the consignment policy of deteriorating inventory with buyer's space restrictions**

Wenyih Lee, Sheng-Pen Wang

■ TB-15

Tuesday, 10:40-12h00

2.2.12

Polyhedral Approaches to Routing Problems

Chair: Angel Corberan

1 - A polyhedral model for the windy clustered prize-collecting arc routing problem

Carles Franquesa, Angel Corberan, Elena Fernandez, Jose Maria Sanchis

2 - Hop-indexed circuit-based formulations for the travelling salesman problem

Maria Teresa Godinho, Luis Gouveia, Pierre Pesneau

3 - On the maximum benefit Chinese postman problem

Angel Corberan, Isaac Plana, Antonio Manuel Rodríguez-Chía, Jose Maria Sanchis

4 - A random-pivoting algorithm for the Hamiltonian cycle problem

Ali Eshragh Jahromi, Jerzy Filar

■ TB-16

Tuesday, 10:40-12h00

2.2.14

Public Bus Transportation

Chair: *Marjan van den Akker*

1 - Resource scheduling in public transport - scheduling with similarity aspects

Boris Amberg, Natalia Kliewer

2 - Optimizing depot locations based on a public transportation timetable

Marjan van den Akker, Han Hoogeveen, Marcel van Kooten Niekerk

3 - Modifying timetables for integrated schedules

Neele Hansen, Sven Krumke

4 - Multicriteria optimization in public transportation

Steffen Weider

■ TB-17

Tuesday, 10:40-12h00

1.3.14

Container Terminal Planning I

Chair: *Christian Bierwirth*

Chair: *Frank Meisel*

1 - Models for the discrete berth allocation problem: a computational comparison

Jesper Larsen, Katja Buhrkal, Sara Zuglian, Stefan Ropke, Richard Lusby

2 - How distant berth allocation models are from practice? in praise of human planners

Luigi Moccia

3 - Storage arrangement on the yard for transshipment containers by meta-heuristics

Etsuko Nishimura, Akio Imai

4 - Determining the quay crane capacity for a seaport container terminal

Frank Meisel, Christian Bierwirth

■ TB-18

Tuesday, 10:40-12h00

1.3.15

Simulation and Optimization of Networks under Uncertainty

Chair: Erik Kropat

Chair: Zeev (Vladimir) Volkovich

Chair: Gerhard-Wilhelm Weber

1 - N-dimensional volume estimation of convex bodies: algorithms and applications

Mamta Sharma, G. N. Srinivasa Prasanna, Abhilasha Aswal

2 - Extinction probabilities of decomposable branching processes

Sophie Hautphenne

3 - Quantitative release planning in extreme programming

Tommi Tervonen, Gert van Valkenhoef, Bert de Brock, Douwe Postmus

4 - Search of the best alliance composition in a interdomain network

Daniel Villa Monteiro, Thierry Mautor, Dominique Barth, Thierry Mautor

■ TB-19

Tuesday, 10:40-12h00

1.3.20

Networks and Industrial Organization

Chair: *Telmo Parreira*

Chair: *Fernanda A. Ferreira*

1 - Checking capacity of gas transmission network

Dan Gugenheim, Fabrice Chauvet

2 - Single-commodity network design with random edge capacities

Biju K. Thapalia, Teodor Gabriel Crainic, Michal Kaut, Stein W. Wallace

3 - A hotelling network

Telmo Parreira, Alberto A. Pinto

4 - The licensing of patents

Fernanda A. Ferreira

■ TB-20

Tuesday, 10:40-12h00

1.3.33A

Cutting and Packing 7

Chair: *Gleb Belov*

1 - A hybrid algorithm for constraint order packing

Nikolaus Furian, Siegfried Voessner

2 - A biobjective bin packing problem with conflicts

Ali Khanafer, François Clautiaux, El-Ghazali Talbi

3 - An efficient algorithm for a real-life case of the variable size bin packing problem

Rune Larsen, Joergen Bang-Jensen

4 - An algorithm for orthogonal packing using consecutive-ones matrices

Gleb Belov

■ TB-21

Tuesday, 10:40-12h00

6.2.47

Optimization Modeling V

Chair: *Alexandra Newman*

1 - A hub location model for network design of wagonload traffic

Julia Sender, Uwe Clausen

2 - A collaborative optimization approach to plant-wide scheduling problems

Sleman Saliba, Guido Sand, Xu Chaojun

3 - Efficient mixed integer programming formulations in energy and mining

Alexandra Newman

■ TB-22

Tuesday, 10:40-12h00

3.1.10

Health Care Scheduling II

Chair: *Jens Brunner*

1 - Fair optimization of the fortnightly physician schedules with flexible shifts

Jens Brunner, Raik Stolletz

2 - Blood ordering quantities: a model to calculate ideal order quantities in hospital blood banks to minimize wastage

Sebastian Stanger, Marina Gebhard, Gernot Kaiser

3 - Materials handling in hospitals: a case study

Christiane Reichart, Amílcar Arantes

■ TB-23

Tuesday, 10:40-12h00

6.2.49

MOO: Network Optimization and Transportation

Chair: *Marta Pascoal*

1 - A reference point approach for multicriteria dial-a-ride problems

Julie Paquette, Jean-François Cordeau, Gilbert Laporte

2 - A hybrid algorithm for a service technician routing and scheduling problem

Sophie Parragh

3 - The pipeline and valve location problem

Marta Pascoal, Gilbert Laporte

4 - A new hybrid evolutionary heuristic for the bi-objective bus driver rostering problem

Ana Respicio, Margarida Moz, Margarida Pato

■ TB-24

Tuesday, 10:40-12h00

6.2.50

Algorithms in Computational Biology

Chair: *Paola Festa*

1 - Cliques and related cliques: models and applications

Pedro Martins

2 - Modeling of epidemic transmission and predicting the spread of pathogenic

Tertia Delia Nova, Herman Mawengkang

3 - Microarray data reduction and classification

Sílvia Pedro, Lisete Sousa, Ana Pires

■ TB-25

Tuesday, 10:40-12h00

6.2.48

Risk Management and Portfolio Optimization II

Chair: *Michael Markov*

1 - Portfolio calibration approach for asset allocation and financial optimizations

Michael Markov, Evgeny Bauman

2 - Minimum risk methodology for portfolio selection

Konstantinos Kiriakopoulos, George Kaimakamis, Theodoros Mavralexakis

3 - Multiperiod portfolio optimization: comparing approximate dynamic programming with stochastic programming methods

Dimitrios Karamanis, Katerina Papadaki

4 - Multi-criteria decision making techniques: a stock selection application

M.Fatih Bayramoglu, Coskun Hamzaçebi

■ TB-26

Tuesday, 10:40-12h00

3.1.11

Games solutions

Chair: *Encarnación Algaba*

1 - A non-cooperative and an axiomatic characterizations of the al-values

Yukihiko Funaki, Takumi Kongo, Mariana Rodica Branzei, Stef Tijs

2 - The restricted prenucleolus

Ilya Katsev, Elena Yanovskaya

3 - Cooperative solutions on ranking situations

Manuel A. Pulido Cayuela, Joaquin Sánchez-Soriano, Natividad Llorca, Juan Aparicio, Julia Sancho

4 - Properties of the myerson value in communication structures

Encarnación Algaba, Jesus-Mario Bilbao, Rene van den Brink, Jorge López

■ TB-27

Tuesday, 10:40-12h00

8.2.06

AIR TRANSPORTATION AND LOGISTICS

Chair: *Kerem Akartunali*

1 - Efficient delay distribution in air transportation networks

Claus Gwiggner, Sakae Nagaoka

2 - Optimally allocating boat resources at the united states coast guard

Michael Wagner, Zinovy Radovilsky

3 - Flow variation with savings in average cost

Sonia , Ankit Khandelwal

4 - Airline schedule design: network design optimization and heuristics ideas

Kerem Akartunali, Natashia Boland, Ian Evans, Mark Wallace, Hamish Waterer, Olivia Smith

■ TB-28

Tuesday, 10:40-12h00

8.2.10

Stochastic Programming Models 2

Chair: *David Wozabal*

Chair: *John Tomlin*

1 - Stochastic project scheduling: a financial viewpoint for the gate setting problem

Bernardo Pagnoncelli, Nicole Suella Fernandez, Alexandre Street

2 - Medium-term planning of a multi-product batch plant under evolving multi-period multi-uncertainty by means of a moving horizon strategy

Jian Cui, Sebastian Engell

3 - A probabilistic provider selection and task allocation model in telecommunication networks with stochastic qos guaranties

Hasan H. Turan, Nihat Kasap

4 - Sensitivity of an inventory allocation model for online advertising with stochastic supply

John Tomlin, Vijay Bharadwaj, Michael Saunders, Michael Saunders

■ TB-29

Tuesday, 10:40-12h00

8.2.11

Applications of Boolean Functions

Chair: *Utz-Uwe Haus*

1 - Minimal conflicting sets in ancestral genome reconstruction

Tamon Stephen

2 - Mdd-based propagation of among constraints

Willem-Jan van Hove, Samid Hoda, John N. Hooker

3 - Discovering all associations in discrete data using frequent minimally infrequent attribute sets

Utz-Uwe Haus, Elke Eisenschmidt

4 - Computing exact solutions for row layout problems

Miguel Anjos, Frauke Liers

■ TB-30

Tuesday, 10:40-12h00

8.2.13

MCDA II: Group Decision

Chair: *Juan Carlos Leyva-Lopez*

1 - A model of consensus in group multicriteria decision aiding

Juan Carlos Leyva-Lopez

2 - An approach for group decision with incomplete information

Paula Sarabando, Luis C. Dias

3 - A group multicriteria decision support system for rank a finite set of alternatives

Pavel Alvarez Carrillo, Alfonso Duarte, Juan Carlos Leyva-Lopez

■ TB-31

Tuesday, 10:40-12h00

8.2.15

OR and Ethics II

Chair: *Haavard Koppang*

1 - Modeling distributive justice

John N. Hooker

2 - The compromise efficiency vs. egalitarianism among generations with an infinite horizon

José Carlos R. Alcantud

3 - In bed with the military: ethics dilemmas for humanitarian organizations

Bent Erik Bakken

4 - A reflection on or, freedom and responsibility

João Clímaco, José Antonio Peixoto

■ TB-32

Tuesday, 10:40-12h00

8.2.17

OR in Agriculture

Chair: *Marcela Gonzalez*

1 - Effects of education and investment in research in agricultural production in Brazil

Eliane Gomes, Geraldo Souza, Rosaura Gazzola, Antonio Flavio Avila

2 - Optimal multiobjective crop rotation planning using evolutionary algorithms

Ruth Pavón Mendoza, Ricardo Brunelli, Christian von Lucken

3 - A linear optimization approach for vegetable crop production planning

Marcos Arenales, Lana Mara Santos, Alysson Costa, Ricardo Henrique Santos

4 - A model for balancing production lines in a packing plant

Marcela Gonzalez, Hugo Santelices

■ TB-33

Tuesday, 10:40-12h00

8.2.19

Renewable Energy Production

Chair: *Gonçalo Cardoso*

1 - Impact of bio-fuels in the adoption of small chp units in the Portuguese building sector

Gonçalo Cardoso, Paulo Ferrao, Ana Paula Barbósa-Póvoa

2 - A network integration oriented model to evaluate new wind power generation projects

Halil Cobuloglu, Ilhan Or, Gürkan Kumbaroglu

3 - Investment scenarios in new generation power grids across the mediterranean

Elena Claire Ricci, Emanuele Massetti

■ TB-34

Tuesday, 10:40-12h00

8.2.23

Model Formulations and Real World Applications of Lot Sizing and Scheduling IV

Chair: *Alistair Clark*

1 - An integrated blending and lot-sizing problem in a cotton spinning industry

Victor C. B. Camargo, Bernardo Almada-Lobo, Franklina Toledo

2 - Lot-sizing and scheduling problems with small time buckets

Waldemar Kaczmarczyk

3 - Planning printers production by a lot-sizing and scheduling model

Joao Flavio F. Almeida, Marcio Mariano Junior, Magno Silverio Campos

■ TB-35

Tuesday, 10:40-12h00

6.2.46

Facilitated Modelling in Action Research

Chair: *L. Alberto Franco*

1 - A systematic procedure to evaluate the impact of multi-methodology interventions

Felipe Henao, L. Alberto Franco

2 - Using action research on the process of decision support with vip analysis software

Alecsandra Ventura, Luis C. Dias, João Clímaco

3 - Creating a shared language in multi-disciplinary teams through facilitated modelling: a case from the innovation sector

Donna Champion

4 - Methodological criteria for the internal validity and utility of practice oriented research

Hubert Korzilius

■ TB-36

Tuesday, 10:40-12h00

3.1.05

Forecast based on fuzzy logic or neural networks

Chair: *Heinrich Rommelfanger*

1 - Market share forecasting by using fuzzy multiple objective piecewise logistic model and delphi method

Jing-Rung Yu, Fang-Mei Tseng

2 - A new approach to forecast neural network-based fuzzy time series

Ozer Ozdemir, Memmedaga Memmedli

3 - Neural network approach for product return rate forecasting in reverse logistics

Gül Tekin Temur, Bersam Bolat, Lütfü Yakupo?lu, Volkan Y?lmaz

4 - Prediction of exchange rates with parametric and non parametric techniques: a comparison study

Slim Chokri

■ TB-37

Tuesday, 10:40-12h00

3.1.09

Meeting the targets: policy and measures

Chair: *Nadia Maïzi*

1 - Regional impacts of post copenhaguen emission reduction pledges using tiam-fr

Sandrine Selosse, Edi Assoumou, Nadia Maïzi

2 - Impact of the price of CO2 certificates on the energy system of the eu-27

Markus Blesl

3 - Modelling technology pathways for oil use reduction in swedish passenger car transport

Martin Börjesson, Erik Ahlgren

4 - Theory versus reality in the residential buildings sector: analysis of a gap and its consequences.

Benoit Allibe

■ TB-38

Tuesday, 10:40-12h00

6.2.44

Stochastic Valuation of Derivatives and Commodities I

Chair: *Martin Rainer*

Chair: *Ömür Ugur*

Chair: *Javier de Frutos*

1 - An empirical study on R&D value based upon modified finite compound option models

Yu Wen Lan, Tze Chin Huang

2 - Information costs impacts on real options valuation

Jean-Michel Sahut

3 - Callable russian options with the finite maturity

Atsuo Suzuki, Katsushige Sawaki

■ TB-39

Tuesday, 10:40-12h00

6.2.45

Advances in Control Problem

Chair: *Robert Baier*

1 - Virtual control concept for linear quadratic optimal control problems with state constraints

Bjoern Huepping, Matthias Gerds

2 - On the optimal control of a cascade of hydro-electric power stations

Maria do Carmo Guedes, Ana Ribeiro, Georgi Smirnov, Sonia Vilela

3 - Optimal control of a flexible server in a queueing network with operation costs

Dimitrios Pandalis

■ TB-41

Tuesday, 10:40-12h00

3.1.06

Applications of System Dynamics Modeling I

Chair: *Lukas Schmid*

Chair: *Katrin Hügel*

1 - Quality assurance in education — how does the selection of applicants matter?

Peter Bradl

2 - Animated visualizations of structure and behavior in system dynamics

Ricardo Sotaquira Gutierrez

3 - Spreading system dynamics to smes by using generic structures

Katrin Hügel, Lukas Schmid

4 - Success dynamics: an application of system dynamics to corporate success logic

Lukas Schmid, Katrin Hügel, Marcel Loher

■ TB-42

Tuesday, 10:40-12h00

3.1.07

Data Analysis and Decision Making

Chair: *Vadim Strijov*

Chair: *Michael Khachay*

1 - Stable group purchasing organizations

Greys Susic, Mahesh Nagarajan, Hao Zhang

2 - Development of competitive marketing strategy using conjoint analysis and game theory

Marija Kuzmanovic, Milan Martic

3 - Ship's trajectory analysis in lisbon harbor

João Paiva

■ TB-43

Tuesday, 10:40-12h00

8.2.02

Revenue Management III

Chair: *Claudius Steinhardt*

1 - Overbooking with last-hour voluntary standby

Leonardo Lustosa, Cristina Araneda-Fuentes

2 - The pull-to-center effect in newsvendor problems — behavioral evidence from experiments with skewed demand distributions

Christian Koester, Heike Schenk-Mathes

3 - Dynamic pricing and efficient management of repairs and provisions resources

Rupal Rana, Fernando Oliveira

■ TB-44

Tuesday, 10:40-12h00

8.2.03

Simulation Decision Support in Enterprises

Chair: *Miroljub Kljajic*

- 1 - Simulation based decision support system for inventory control with stochastic lead time and demand**

Davorin Kofjac, Miroljub Kljajic, Valter Rejec

- 2 - Approach to determination of manpower transition strategies — modeling, problems and methods**

Andrej Skraba, Miroljub Kljajic, Davorin Kofjac

- 3 - The simulation model for agricultural policy decision making with respect to organic agriculture**

rtomir Rozman, Pazez Karmen, Miroljub Kljajic, Andrej Skraba

■ TB-45

Tuesday, 10:40-12h00

8.2.12

Restricted and Unrestricted Clustering

Chair: *Peter Gritzmann*

Chair: *Andreas Brieden*

1 - On clustering bodies and their applications

Peter Gritzmann, Andreas Brieden

2 - Data classification by cell decompositions

Steffen Borgwardt

3 - Partition problems: optimality and clustering

Uriel G. Rothblum

4 - Minimizing risk and costs - two applications of geometric clustering

Andreas Brieden, Peter Gritzmann

■ TB-46

Tuesday, 10:40-12h00

8.2.14

Agent-Based Modeling of Electricity Markets

Chair: *Massimo Genoese*

1 - Are agent-based simulations robust? the wholesale electricity trading case

Augusto Rupérez Micola, Albert Banal-Estanol

2 - An agent-based model of the relationship between forward and spot electricity markets

Fernando Oliveira

3 - Agent-based participatory simulation of the german electricity market

Massimo Genoese, Dominik Möst, Wolf Fichtner

■ TB-47

Tuesday, 10:40-12h00

8.2.16

Stochastic Models for Service Operations I

Chair: *Giorgio Romanin-Jacur*

1 - A location model for planning hospital networks under uncertain demand

Ana Mestre, Mónica Oliveira, Ana Paula Barbósa-Póvoa

2 - Pediatric palliative care network organization

Giorgio Romanin-Jacur, Giada Aspergh, Paola Facchin, Anna Ferrante, Laura Visona_Dalla_Pozza

3 - Quality and efficiency tradeoff in systems with flexible workforce

Eser Kirkizlar, Sigrun Andradottir, Hayriye Ayhan

4 - Investigating whether it is optimal to make replenishments simultaneously in a dual source model

Soheil Abginehchi, Christian Larsen

■ TB-48

Tuesday, 10:40-12h00

8.2.04

Heuristics 2

Chair: *Ana Maria A.C. Rocha*

1 - Modified differential evolution for nonlinear global optimization

Md. Abul Kalam Azad, Edite M.G.P. Fernandes

2 - Heuristic and exact approaches to the pipeline network design problem

Gustavo Dias, Laura Bahiense, Virgílio José Martins Ferreira Filho

3 - Exact and heuristic approaches for minlps in production planning of oil refining

Ormeu Coelho, Laura Bahiense, Virgílio José Martins Ferreira Filho

4 - A genetic algorithm for stabilization of a quadruped robot locomotion

Lino Costa, Ana Maria A.C. Rocha, Cristina Peixoto Santos

■ TC-01

Tuesday, 12:20-13:40

Aula Magna

Keynote Talk 7

Chair: *Denis Bouyssou*

1 - Bilevel programming and price optimization problems

Martine Labbé

■ TC-02

Tuesday, 12:20-13:40

3.2.14

Cooperative Games and Combinatorial Optimization

Chair: *Nelson Uhan*

1 - Cooperative games and fractional programming

Walter Kern, Xian Qiu

2 - Optimal and fair partitions in additively separable hedonic games

Haris Aziz, Felix Brandt, Hans Georg Seedig

3 - Cost sharing for economic lot-sizing problems with remanufacturing options

Nelson Uhan, Mohan Gopaladesikan

■ TC-03

Tuesday, 12:20-13:40

3.2.15

Inventory and routing problems

Chair: *Yury Kochetov*

Chair: *Jonata Araujo*

1 - A deterministic annealing algorithm for the simultaneous routing of loaded and empty container movements

Kris Braekers, Gerrit Janssens, An Caris

2 - An iterated local search to solve a multiobjective integrated distribution problem

Helena Ramalhinho Lourenço, Angel A. Juan, Rita Ribeiro

■ TC-04

Tuesday, 12:20-13:40

3.2.13

Industrial and city problems

Chair: *Luc Muyldermans*

Chair: *Christophe Duhamel*

1 - Co-collection and postponement strategies: a kerbside household waste collection case study

Gu Pang, Luc Muyldermans

2 - Ants solve the integrated vehicle and crew scheduling problem in the public urban bus system of ljubljana, slovenia

David Pas, Balazs David, Jozsef Bekesi, Miklos Kresz, Andrej Brodnik

3 - Heuristics for the mobile oil recovery problem

Christophe Duhamel, Joan-Manuel Ortega-Ardila, Andréa C. Santos

4 - Solving the bus network design problem for the suburban area in hong kong by a hybrid genetic algorithm

Wai Yuen Szeto, Yongzhong Wu, S.c. Wong

■ TC-05

Tuesday, 12:20-13:40

3.2.16

Location under uncertainty

Chair: *Laureano Fernando Escudero*

1 - On the solving the multi-period location problem under uncertainty

Antonio Alonso-Ayuso, Maria Albareda Sambola, Laureano Fernando Escudero, Elena Fernandez, Celeste Pizarro Romero

2 - A stochastic location problem of k-centers on graph

Biljana Panic, Mirko Vujosevic, Ognjen Pantelic, Tamara Valok

3 - Stochastic set packing problem

Laureano Fernando Escudero, Mercedes Landete, Antonio Manuel Rodríguez-Chía

4 - On the location of lottery terminals in Spain

Daniel Serra

■ TC-06

Tuesday, 12:20-13:40

8.2.30

DEA Application II - Education

Chair: *Maria Portela*

1 - Efficiency evaluation of distance education in rio de janeiro

João Carlos Soares de Mello, Fernando do Valle Silva Andrade, Luana Carneiro Brandão, Lidia Angulo-Meza

2 - Efficiency evaluation of private teaching institutions by data envelopment analysis

Abdullah Korkut Üstün, Ezgi Aktar Demirtas

3 - Comparative performance of public universities in malaysia using data envelopment analysis

Wan Rohaida Wan Husain

4 - Performance assessment of Portuguese secondary schools

Maria Portela, Ana Camanho, Diogo Borges

■ TC-07

Tuesday, 12:20-13:40

8.2.47

DEA - General topics II

Chair: *Dimitris Despotis*

1 - Using fdh technology to determine anchor points in DEA

Abolfazl Keshvari, Mohammad Reza Alirezaee

2 - A performance study on business centers of chunghwa post company in taiwan

Chin-Piao Lin, Shinn Sun

3 - Congestion in stochastic data envelopment analysis: an input relaxation approach

Luka Neralic

■ TC-08

Tuesday, 12:20-13:40

6.1.36

Production Scheduling

Chair: *Dirk Briskorn*

1 - Yield vs. flow-time tradeoff in a production system

Israel Tirkel, Gad Rabinowitz

2 - Rolling stock maintenance planning

Francis Sourd, Mathilde Carlier, Raphaël Even

3 - Scheduling flexible maintenance activities on a single machine

Dirk Briskorn, Stefan Bock, Andrei Horbach

■ TC-09

Tuesday, 12:20-13:40

6.2.53

Mathematical Programming, Machine and Statistical Learning

Chair: *Tamas Terlaky*

1 - On the rescaling algorithms for linear optimization

Tamas Terlaky, Dan Li

2 - Comparison of performance of all-together support vector machines for multiclass classification

Keiji Tatsumi, Tetsuzo Tanino

3 - On the incomplete oblique projections method for solving box constrained least squares problems

Hugo Scolnik

4 - Gaussian kernel models for irregular demand processes

José Luís Carmo, Antonio Rodrigues

■ TC-10

Tuesday, 12:20-13:40

6.2.56

Graphs and Networks VIII

Chair: *Bernard Ries*

1 - 11 methods for proving infeasibility of ip's.

Anastasia Kouvela, Dimitris Magos, Gautam Appa, Yiannis Mourtos

2 - The metric dimension of generalized Petersen graphs

Mirjana Cangalovic, Jozef Kratica, Vera Kovacevic Vujcic

3 - Profit maximizing pricing on graphs.

Khaled Elbassioni, Rajiv Raman

■ TC-11

Tuesday, 12:20-13:40

8.2.38

Advances in the Use of Information Technology II

Chair: *Sevgi Ozkan*

Chair: *Gerhard-Wilhelm Weber*

1 - Reducing product development complexity through information management

Ahm Shamsuzzoha, Petri Helo

2 - Marketing information systems (mis) as a tool for performance measurement in Nigeria aluminium industry: operations research perspective

Joshua Magbagbeola

3 - Multicriteria decision analysis and geographic information systems (gis)

Ceren Gundogdu

4 - Evaluate collaboration design systems performance based on cegra

Cheng-Ru Wu, Chiu-Chin Chen

■ TC-12

Tuesday, 12:20-13:40

8.2.39

ANP 03

Chair: Yasemin C. Erensal

1 - Sequencing attributes of energy portfolio optimization in industrial regions

Alp Muzaffer Arslan, Gulgun Kayakutlu

2 - The process of a taiwan pharmaceutical company selects drugs for international contract manufacturing

Su-Chuan Shih

3 - An ANP based bocr approach for marketing strategy selection

Tuncay Gürbüz, Y. Esra Albayrak, Yasemin C. Erensal

4 - The relationship of salary and performance for food and beverage industry based on dematel with a MCDM model

Yi-Chun Chen, Gwo-Hshiung Tzeng

■ TC-13

Tuesday, 12:20-13:40

2.2.21

Reliability in Location

Chair: *Dmitry Krass*

1 - Location problems with two unreliable facilities on a line

Mozart Menezes, Oded Berman, Dmitry Krass

2 - Hedging against territorial disruptions in capacitated distribution systems

Federico Liberatore, Maria Paola Scaparra

3 - An exact linear reformulation of the expected maximum covering problem

Jesse O'Hanley, Sergio García Quiles, Maria Paola Scaparra

4 - Optimal solution to n-median with unreliable facilities on a line

Dmitry Krass, Oded Berman

■ TC-14

Tuesday, 12:20-13:40

2.2.15

Vendor Managed Inventory

Chair: *Michael Vidalis*

1 - Implementing a supplier managed inventory policy in an internal logistics setting

Tim Govaert, El-Houssaine Aghezzaf, Sofie Van Volsem

2 - Coordination of production and dispatching decisions in vendor managed inventory systems

Onur Kaya, Deniz Kubali, E. Lerzan Ormeci

3 - Supplier managed inventory in case of stochastic demand and finite supply

Sofie Van Volsem, El-Houssaine Aghezzaf, Tim Govaert

4 - Modeling a supply chain with two members, (s, s) inventory policy Poisson external demand and coxian-2 lead time

Michael Vidalis, Vassilios Vrisagotis

■ TC-15

Tuesday, 12:20-13:40

2.2.12

Dynamic and Stochastic Vehicle Routing

Chair: *Lars Magnus Hvattum*

- 1 - Real-time delivery of perishable goods using past request data to increase customer service quality**

Francesco Ferrucci, Stefan Bock, Michel Gendreau

- 2 - Robust optimization of internal transports**

Brigitte Werners

- 3 - Metaheuristics for the dynamic stochastic dial-a-ride problem with expected return transports**

Michael Schilde, Karl Doerner,

- 4 - Using decision trees for a stochastic maritime routing problem**

Lars Magnus Hvattum, Eystein Fredrik Esbensen, Kjetil Fagerholt, Bjørn Nygreen

■ TC-16

Tuesday, 12:20-13:40

2.2.14

OR Applications in Railways

Chair: *Dennis Huisman*

1 - Integrated planning of railway transportation resources

David De Almeida, Faten Benhizia, Stéphane Dauzere-peres

2 - Solving large scale crew scheduling problems efficiently

Ricardo Saldanha, Erwin Abbink, Luis Albino, Twan Dollevoet, Dennis Huisman, Jorge Rousado

3 - Tram traffic management at signalised junctions with tram stops

Jeremi Rychlewski

4 - Developments in crew re-scheduling at netherlands railways

Dennis Huisman, Daniel Potthoff

■ TC-17

Tuesday, 12:20-13:40

1.3.14

Models for Vehicle Routing

Chair: *Nurul Mohamed*

1 - Multi-depot vehicle routing problem (mdvrp): comparative study of alternative formulations

Tânia Ramos, Maria Isabel Gomes, Ana Paula Barbósa-Póvoa

2 - Two objective functions for a special split delivery vehicle routing problem

Marc Uldry, Marino Widmer

3 - Branch-and-price for the multi-depot pickup and delivery problem with heterogeneous fleet and soft time windows

Andrea Bettinelli, Alberto Ceselli, Giovanni Righini

4 - Split delivery vehicle routing problem

Nurul Mohamed, Said Salhi, Gábor Nagy

■ TC-18

Tuesday, 12:20-13:40

1.3.15

Complex Systems under Uncertainty: Networks and Data Mining

Chair: *Erik Kropat*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Zeev (Vladimir) Volkovich*

1 - On a class of branching problems in broadcasting and distribution

Sohail Chaudhry, Edward Rosenthal, In-Chan Choi, Jinbong Jang

2 - Data mining approach for network intrusion detection using mobile agent

Djamal Dris, Lynda Sellami, Khaled Sellami, Mohamed Ahmed-nacer

3 - Probabilistic analysis of multidimensional assignment problems

Pavlo Krokhmal

4 - Operating overall production under chance constraints

Baruch Keren, Zohar Laslo, Gregory Gurevich

■ TC-19

Tuesday, 12:20-13:40

1.3.20

Universality in complex systems

Chair: *Rui Gonçalves*

- 1 - Euclidean Jordan algebras, generalized krein conditions and strongly regular graphs with one eigenvalue in modulus less than one**

Luís Vieira

- 2 - The relationship between crude oil prices and exchange rates**

André Salles

- 3 - Universality in the stock market**

Rui Gonçalves, Helena Ferreira, Alberto Pinto

- 4 - Nonparametric prediction of bank loan recoveries**

João Bastos

■ TC-21

Tuesday, 12:20-13:40

6.2.47

Software for OR/MS I - Optimization

Chair: *Bjarni Kristjansson*

- 1 - Why is maximal software now giving away free development copies of the MPL modeling system?**

Bjarni Kristjansson, Sandip Pindoria

- 2 - Performance of optimization software - an update**

Hans Mittelmann

- 3 - Xpress-kalis: automatic linear relaxations for combined cp-mip problem solving with application to nuclear power plant maintenance outage scheduling**

Susanne Heipcke, Fabrice Buscaylet

- 4 - Adaptable robust optimization and chance constraints approximation using automatic model generation in AIMMS**

Ovidiu Listes

■ TC-22

Tuesday, 12:20-13:40

3.1.10

Health Care Policy Making I

Chair: *Dave Worthington*

1 - New integer-programming formulation for kidney exchange problem

Dorien de Regt, Abdur Rais, Miguel Constantino, Ana Viana

2 - Setting staffing requirements for time dependent queueing networks: the case of accident and emergency departments

Navid Izady, Dave Worthington

3 - Optimal multileaf collimator leaf sequencing in imrt treatment planning

Z. Caner Ta?k?n, Cole Smith, Edwin Romeijn, James Dempsey

4 - Measuring the effect of workers' health on productivity

Fredrik Odegaard, Pontus Roos

■ TC-23

Tuesday, 12:20-13:40

6.2.49

MOO: Facility Location Problems

Chair: *Carlos Ferreira*

1 - The embedment of a GIS in a decision support system for bicriteria location problems

Sérgio Fernandes, Maria Eugénia Captivo, João Clímaco

2 - An interactive method for multi-objective integer and mixed-integer programming applied to a facility location problem

Carlos Ferreira, Rui Borges Lopes, Beatriz Sousa Santos

3 - A multi-objective evolutionary algorithm for the capacitated location-routing problem

Rui Borges Lopes, Carlos Ferreira, Beatriz Sousa Santos

4 - Routing location multi criteria optimization metaheuristics

Claudia Margarita Villagran de Leon

■ TC-24

Tuesday, 12:20-13:40

6.2.50

Data Mining in Bioinformatics

Chair: *Giovanni Felici*

1 - Genetic programming for feature extraction in supervised learning

Mauro Castelli, Ilaria Giordani, Francesco Archetti, Enza Messina, Leonardo Vanneschi

2 - Feature selection with hyperspheres

Paola Bertolazzi, Giovanni Felici, Paola Festa

3 - Feature discretization and clustering in the dmb logic mining environment

Paola Bertolazzi, Giovanni Felici, Emanuel Weitschek, Guido Drovandi

■ TC-25

Tuesday, 12:20-13:40

6.2.48

Volatility Spillover and Liquidity Risk

Chair: *Emrah Sener*

Chair: *Feyzullah Egriboyun*

1 - Dynamic spillover effects of deviation in covered interest rate parity through term structure

Feyzullah Egriboyun, Sait Satiroglu, Emrah Sener

2 - Discrete and continuous-time liquidity models

Selim Gokay, Mete Soner

3 - Volatility spillover dynamics between the emerging cds, bond and equity markets

Emrah Sener, Sevan Ulutas, Osman Yilmaz

■ TC-26

Tuesday, 12:20-13:40

3.1.11

Cooperative Games and Applications

Chair: *M^a Luisa Carpenté*

1 - The proportional coalitional Shapley value

Francesc Carreras, José María Alonso-meijide

2 - Bilateral assignment markets with the same core

Javier Martínez de Albeniz, Marina Nunez, Carles Rafels

3 - The Shapley value and some stability conditions

M^a Luisa Carpenté, Balbina-Virginia Casas-Méndez, Ignacio García-Jurado

■ TC-27

Tuesday, 12:20-13:40

8.2.06

FREIGHT TRANSPORTATION

Chair: *Walter Ukovich*

1 - A simulation-optimization approach for drawing stowage plans for containerships

Rina Mary Mazza, M. Flavia Monaco, Marcello Sammarra, Gregorio Sorrentino

2 - Freight transportation planning in railway networks with rapid transshipment terminals

Davide Anghinolfi, Massimo Paolucci, Simona Sacone, Silvia Siri

3 - A mathematical programming approach to the multi-port master bay plan problem

Massimo Paolucci, Daniela Ambrosino, Davide Anghinolfi, Anna Sciomachen

4 - A metamodeling approach to the management of intermodal transportation networks

Walter Ukovich, Valentina Boschian, Mariagrazia Dotoli, Maria Pia Fanti, Giorgio Iacobellis, Gabriella Stecco

■ TC-29

Tuesday, 12:20-13:40

8.2.11

Theory of Boolean Functions

Chair: *Gyorgy Turan*

1 - The arity gap of functions of boolean variables and lattice polynomial functions

Miguel Couceiro

2 - Construction and learnability of canonical horn formulas

Marta Arias

3 - Essential sets and horn minimization

Endre Boros, Ondrej Cepek, Alex Kogan, Petr Kucera

4 - On the approximate minimization of horn formulas

Gyorgy Turan

■ TC-30

Tuesday, 12:20-13:40

8.2.13

PROMETHEE: Axiomatic basis and other issues

Chair: *Gabriela Fernández Barberis*

- 1 - Semi orders, interval orders and pseudo orders preference structures in multiple criteria decision aid method**

Gabriela Fernández Barberis

- 2 - D-sight: a new decision aid software**

Quantin Hayez, Yves De Smet, Bertrand Mareschal

■ TC-31

Tuesday, 12:20-13:40

8.2.15

Network Planning in Postal Logistics

Chair: *Hans-Jürgen Sebastian*

1 - Allocation of international long-haul transportation lanes to sorting centers at deutsche post

Christoph Hemsch, Andreas Marschner, Thomas Müller

2 - A strategic model to simultaneously find optimal locations, allocations and flows in complex network environments

Thomas Müller, Julia Hillebrandt

3 - Scheduling of long-distance transports in a service network with capacity and time constraints

Tobias Winkelkotte, Li Sun

4 - Optimization of postal transportation networks based on opposite travel mode

Li Sun

■ TC-32

Tuesday, 12:20-13:40

8.2.17

OR in Agriculture and Forest Management

Chair: *Paulo Borges*

1 - Multiple criteria and multiple objectives decision-making for a Brazilian sugar and ethanol milling company

Fernando Marins, Valério Salomon, José Arnaldo Montevechi, Aneirson Silva

2 - Modelling farmers' decision-making using multi-attribute utility theory: a comparative analysis

Laura Riesgo, José A. Gómez-Limón, Jordi Gallego

3 - A model for participative forest management in the mediterranean area

Concepcion Maroto, Concepción Ginestar, Juan Uriol, Baldomero Segura, Juan Fernando Usó

4 - Decision analysis to address risk when assessing impacts of agro forestry policies and economic scenarios - a case study in southern portugal.

Paulo Borges, Brigitte Botequim, Jose Borges, Jordi Garcia_Gonzalo, Rui Fragoso

■ TC-33

Tuesday, 12:20-13:40

8.2.19

Energy Planning Models

Chair: *Carlos Henggeler Antunes*

1 - Risk diffusion in natural gas networks

Parviz Darvish, Fernando Oliveira

2 - A multi-sectoral multiobjective model with interval coefficients to study e3 interactions

Carla Henriques, Carlos Henggeler Antunes

3 - Flexible design of sustainable energy systems under uncertainty

Gonçalo Pereira, Alexandra Moutinho, Carlos Silva

4 - Analyzing the impact of wind power in the electricity market prices of Portugal

Ruben Ramalho, Filipa Amorim

■ TC-34

Tuesday, 12:20-13:40

8.2.23

Generalized Convexity I

Chair: *Gyula Maksa*

- 1 - **Pseudoconvexity of the ratio between a quadratic function and an affine function on the non-negative orthant**

Laura Martein

- 2 - **A class of generalized convex functions: optimality and duality results**

Laura Carosi, Riccardo Cambini

- 3 - **Bernstein-doetsch type results for h-convex functions**

Attila Háy

- 4 - **Regularity and convexity results on approximately h-convex functions**

Pál Burai, Attila Háy

■ TC-35

Tuesday, 12:20-13:40

6.2.46

Researching Facilitated Modelling

Chair: *Etiënne Rouwette*

1 - Shifting perspectives from the individual- to the team-level: the role of mental model convergence

Sara McComb

2 - Exploring the role of cognitive style on the structuring and definition of ill-structured management problems.

L. Alberto Franco, Luiz Felipe Nasser-Carvalho

3 - Strategy maps as a tool to support strategic management — how to optimally map your strategy

Melanie Windolph, Judith Huelle, York Hagmayer, Klaus Moeller

4 - Decision development in facilitated modelling workshops

Etiënne Rouwette, L. Alberto Franco

■ TC-36

Tuesday, 12:20-13:40

3.1.05

Fuzzy Decision Making and Applications

Chair: *Burcu Caglar*

1 - Fuzzy reactive project scheduling

Dorota Kuchta

2 - Determining strategic priorities with fuzzy topsis method

Ihsan Yüksel, Metin Dagdeviren, Erdem Aksakal

3 - Multifactor bullwhip effect analysis using fuzzy model

Ronay Ak, Gulgun Kayakutlu, Cafer Erhan Bozdog

4 - Statistical procedures for robotic assembly line balancing problems

Burcu Caglar, H. Cenk Özmutlu, Ali Yurdun Orbak, Seda Ozmutlu

■ TC-37

Tuesday, 12:20-13:40

3.1.09

Models for Decision Making & Decision Analysis

Chair: *Fatima Dargam*

Chair: *Pascale Zaraté*

1 - Influence of the criteria in the bayesian ahp

Pilar Gargallo, José María Moreno-jimenez, Alfredo Altuzarra

2 - Structuring and assessing large and complex decision problems using MCDA

Michael Bruhn Barfod, Steen Leleur

3 - Transitioning the multistatic tactical planning aid (mstpa) towards decision support

Christopher Strode

■ TC-38

Tuesday, 12:20-13:40

6.2.44

Stochastic Valuation of Derivatives and Commodities II

Chair: *Gerhard-Wilhelm Weber*

Chair: *Henrik Andersson*

1 - Pricing and positioning of remanufactured products using a nested logit model

Necati Aras, Esra Mutlu, I. Kuban Altinel

2 - Comparative evaluation of the unique elements in the evolution of e- and m- auctions

Charis Marentakis, Dimitrios Emiris

3 - When operating cash flows are mean-reverting

Henrik Andersson

4 - Progressive design of auctions for freight transportation services

Ilias Petridis, Dimitrios Emiris, Charis Marentakis

■ TC-39

Tuesday, 12:20-13:40

6.2.45

Optimal Control: Recent Advances I

Chair: *Gerhard-Wilhelm Weber*

1 - Optimal pricing of a conspicuous product during a recession

Gustav Feichtinger, Jonathan Caulkins, Dieter Grass, Peter M. Kort, Richard Hartl, Andrea Seidl

2 - A maximum principle in mixed constrained optimal control problems under weakened assumptions of regularity

Dmitry Karamzin, Aram Arutyunov, Fernando Pereira

3 - Time reparameterization in optimal control of hybrid dynamic systems

Maxim Staritsyn

4 - Sustainability, optimality, and viability in the ramsey model

Noel Bonneuil

■ TC-41

Tuesday, 12:20-13:40

3.1.06

Applications of System Dynamics Modeling II

Chair: *Markus Schwaninger*

1 - Exploring anti counterfeiting strategies: making the case for quantitative strategy evaluation and system dynamics

Oliver Kleine, Marcus Schröter

2 - Urban water consumption management using system dynamics

M Reza Abdi

3 - Modelling of the economic crisis: have we learn the lesson?

Markus Schwaninger, Stefan Groesser

■ TC-42

Tuesday, 12:20-13:40

3.1.07

Data Mining and Forecasting

Chair: *Vadim Strijov*

Chair: *Michael Khachay*

1 - Improving forecasting performance: a meta-model approach

Coskun Hamzaçebi, Alper Aytekin, M.Fatih Bayramoglu

2 - Forecasting consumption of bulk customers with frequent tank level readings

Natanel Sadres, Emmanuelle Patay, Louis-Philippe Kronek, Marie-Eléonore Marmion

3 - Model generation for equity-futures spread forecasting

Roman Sologub

■ TC-43

Tuesday, 12:20-13:40

8.2.02

Global Optimization 1

Chair: *Leocadio G. Casado*

1 - On interval branch-and-bound for separable functions with common variables

Jose Luis Berenguel, Leocadio G. Casado, Eligius M.T. Hendrix, I. Garcia, Frederic Messine

2 - Multidimensional scaling based on universal evolutionary global optimizer and quadratic programming

Juana López-Redondo, Pilar M. Ortigosa, Julius Zilinskas

3 - Copositivity and constrained fractional quadratic problems

Paula Amaral, Immanuel Bomze, Joaquim Judice

4 - Comparison of global and local meta modelling approximations for global optimization

Sergei Kucherenko, Balazs Feil, Nilay Shah

■ TC-44

Tuesday, 12:20-13:40

8.2.03

Interregional Security Work

Chair: *Viveca Asproth*

Chair: *Stig C Holmberg*

1 - C4i2 for interreg security

Erik Borglund, Lena-Maria Öberg

2 - Spatial information for interregional security work

Andreas Ring, Viveca Asproth

3 - Soft early warning for regional security

Viveca Asproth, Stig C Holmberg, Christina Nyström

4 - Business simulator as a tool to improve learning process - experimental results

Miroljub Kljajic, Mirjana Kljajic-Borstnar, Andrej Skraba, Davorin Kofjac

■ TC-45

Tuesday, 12:20-13:40

8.2.12

OR in Military I

Chair: *Ana Isabel Barros*

1 - Procurement decision support for Portuguese mod: the macbeth approach and the acquisition of 8x8 awv

Carlos Bana e Costa, Mario Simoes-Marques

2 - Equipment procurement systems methodology - the military equipment selection

Irena Peharda

3 - Optimization of u.s. army equipment readiness

Javier Salmeron, David Alderson, Robert Dell, Lee Ewing

4 - A cost effective spare parts package for military equipment deployment

Ana Isabel Barros, Nicole van Elst, Karin de Smidt-Destombes, Jan Hontelez, Harm Mulder

■ TC-46

Tuesday, 12:20-13:40

8.2.14

Agent-based Modeling I

Chair: *Massimo Genoese*

Chair: *Markus Günther*

1 - Spatial social networks in an agent-based model of new product diffusion

Elmar Kiesling, Markus Günther, Christian Stummer, Rudolf Vetschera, Lea M. Wakolbinger

2 - A class of random asymmetric multi-agent models for innovation diffusion

Christos Emmanouilides

3 - Organizational innovativeness and diffusion of innovation

Xiaohui Shi, Kiran Fernandes

4 - Intra-firm knowledge diffusion and the emergence of innovations: an agent-based simulation approach

Markus Günther, Christian Stummer

■ TC-47

Tuesday, 12:20-13:40

8.2.16

New technologies in facility Logistics

Chair: *Kai Furmans*

1 - A storage system with virtual aisles

Kai Furmans, Kevin Gue

2 - Optimal zone boundaries in a dense, autonomous and intelligent storage system

Nima Zaerpour, Yugang Yu, René de Koster

3 - The Internet of things in facility logistics

Moritz Roidl, Michael ten Hompel

4 - Analysis of the discrete-time $G|G|1$ -queue

Eda Özden, Kai Furmans

■ TC-48

Tuesday, 12:20-13:40

8.2.04

Nonlinear Optimization and Applications 1

Chair: *Isabel Espírito Santo*

1 - Dengue in cape verde: modelling and optimal control

Helena Sofia Rodrigues, M. Teresa Torres Monteiro, Delfim F. M. Torres

2 - Offline biplot analysis of nondominated sets in multiobjective engineering optimization

Lino Costa, Pedro Oliveira

3 - Comparison of classic and multi-objective genetic algorithms for optimal design and control of chemical processes

Silvana Revollar, Rosalba Lamanna, Pastora Vega, Mario Francisco

4 - Collision avoidance for the atm problem: a mixed 0-1 nonlinear approach

Francisco Javier Martin-Campo, Laureano Fernando Escudero, Antonio Alonso-Ayuso

■ TD-01

Tuesday, 14:00-15:20

Aula Magna

Keynote Talk 8

Chair: *David Pisinger*

1 - Can the computer make scientific discoveries?

Pierre Hansen

■ TD-02

Tuesday, 14:00-15:20

3.2.14

Topics in Combinatorial Optimization

Chair: *Marek Libura*

1 - Robustness analysis in combinatorial optimization.

Marek Libura

2 - Cooperative cuts: graph cuts with submodular edge weights

Stefanie Jegelka, Jeff Bilmes

3 - New formulations for the k-club problem — a comparative study

Maria Almeida, Filipa Carvalho

4 - Solving the quadratic assignment problem by means of general purpose mixed integer linear programming solvers

Huizhen Zhang, Cesar Beltran-Royo

■ TD-03

Tuesday, 14:00-15:20

3.2.15

Transportation and logistics

Chair: *Christophe Duhamel*

Chair: *Jalel Euch*

1 - A hybrid tabu search to solve the heterogeneous fixed fleet vehicle routing problem

Jalel Euch, Habib Chabchoub

2 - Scheduling of road construction projects by means of tabu search algorithm

Jacek Hejducki, Zdzisław Hejducki

3 - Parallel cooperative GRASP for the hvrp

Christophe Duhamel, Philippe Lacomme, Caroline Prodhon, Christian Prins

■ TD-04

Tuesday, 14:00-15:20

3.2.13

Agriculture, forestry and environmental problems

Chair: *Bernard De Baets*

Chair: *Quintin Martin*

1 - Local search based multiobjective metaheuristic for forest planning.

Monica Hernandez, Trinidad Gomez, Julian Molina, Rafael Caballero, Maria Amparo Leon

2 - A genetic algorithm for the optimization of land subdivision in the process of agrarian reform

Mayron César Oliveira Moreira, José Ambrósio Ferreira Neto, Urbano Fra Paleo, José Norberto Muniz

3 - Subset selection from multi-experiment data sets with application to milk fatty acid profiles

Karolien Scheerlinck, Bernard De Baets, Ivan Stefanov, Veerle Fievez

4 - Heuristic methods for modelling the behaviour of climate variables using a multilayer perceptron

Quintin Martin

■ TD-05

Tuesday, 14:00-15:20

3.2.16

Parameter tuning and interactive metaheuristics

Chair: *Martin Josef Geiger*

Chair: *Jana Ries*

1 - On the importance of the initial setting when tuning on-line the parameters of metaheuristics

Paola Pellegrini, Thomas Stützle, Mauro Birattari

2 - Fuzzy instance-specific parameter tuning of instance batches

Jana Ries, Patrick Beullens

3 - Interactive heuristic search and decision making for multi-criteria timetabling problems

Martin Josef Geiger

4 - Tabu search parameters selection for quadratic assignment problem based on general factorial design

Mahdi Bashiri, Hossein Karimi

■ TD-06

Tuesday, 14:00-15:20

8.2.30

DEA Application III - Transportation

Chair: *Sebastián Lozano*

1 - Operational environment and its influence on international airports performance

Rui Marques, Pedro Simões, Pedro Carvalho

2 - Efficiency comparison between 14 regions of rai (iranian railway) using DEA

Mohammad Mehdi Movahedi, Seyed Mohieddin Hoseini

3 - Technical and scale efficiency of interstate bus companies in Brazil

Carlos Ernani Fries, Antonio G.N. Novaes, Mônica M. M. Luna, Helena C. Medeiros

4 - A network DEA model of airlines

Sebastián Lozano, Ester Gutiérrez, Placido Moreno, Jose L. Salmeron

■ TD-07

Tuesday, 14:00-15:20

8.2.47

Scheduling problems in production and service

Chair: *Dirk Briskorn*

1 - Scheduling painting shops with due date restrictions

Stefan Bock, Kathrin Klamroth

2 - Detecting, measuring and repairing instabilities in schedules of tasks with skill requirements

Murat Firat, Cor Hurkens, Alexandre Laugier

3 - Sat-based local search for project scheduling

Andrei Horbach

4 - Scheduling of aircraft landings using aircraft classes

Raik Stolletz, Dirk Briskorn

■ TD-08

Tuesday, 14:00-15:20

6.1.36

Scheduling Applications

Chair: *Natalia Shakhlevich*

1 - An effective algorithm to solve energygrass supply scheduling problem

Laszlo Torjai

2 - Resource allocation in preclinical pharmaceutical research

John Gittins, Shuo Qu, Anne-marie Oreskovich

3 - Zigbee based sensor network design for indoor space gazing system

Jun Matsuo, Hidenori Kawamura, Keiji Suzuki, Takeshi Ikeda, Akio Sashima, Koichi Kurumatani

4 - Scheduling patterns of repetitive tasks: a case study in health care

Natalia Shakhlevich, Alessandro Condotta

■ TD-09

Tuesday, 14:00-15:20

6.2.53

Optimization of Transport Problems on Networks II

Chair: *Simone Göttlich*

1 - Solving equilibrium problems with equilibrium constraints via relaxation approaches

Sonja Veelken

2 - Column generation based heuristic for capacitated arc routing problem with soft time windows

H. Murat Afsar

3 - Paradox in multi-commodity min cost network flow problem

Ankit Khandelwal, Sonia

4 - Improving public disabled transportation using a mathematical programming approach

Gizem Ozel, Alper Unal, Seyda Topaloglu

■ TD-10

Tuesday, 14:00-15:20

6.2.56

OR in Sports 1

Chair: *Dennis Van den Broeck*

1 - Scheduling the play-offs in belgian football

Dries Goossens

2 - Combining the AHP and vikor methodologies for ranking basketball players

Seyhan Sipahi, Bilge Donuk

3 - Was joe girardi foolhardy? an analysis of the new york yankee manager's decision to use only three starting pitchers in the 2009 world series

James Cochran

4 - An inference approach for assessing competitive balance in team sports

Dennis Van den Broeck

■ TD-11

Tuesday, 14:00-15:20

8.2.38

Various New OR Tools and Technologies I

Chair: *Gerhard-Wilhelm Weber*

Chair: *Tatiana Tchemisova*

1 - To develop an e-commerce website template for undergraduates

Özge Nalan Alp, Nurgül Demirta?, Hayri Baraçl?

2 - Measuring virtual experience in 3-d vr interactive simulator environment: a structural equation modeling approach

Pao-Long Chang, Ming-Hua Chieng

3 - Exploring the evolutionary life of white led lighting technology with technology prediction

Yuanchau Liour, Po-Liang Chao, Chie-bein Chen

4 - Models and techniques of recourse allocation in controlling the semi-structured social and economic objects

Nikolai Korgin, Dmitry Makarenko

■ TD-12

Tuesday, 14:00-15:20

8.2.39

ANP 04

Chair: *Mei-Chen Lo*

1 - A model for equipment selection: an integrated approach with dematel and ANP

Metin Dagdeviren, Erdem Aksakal, Ihsan Yüksel

2 - Improving the assessment of railway projects through new performance indicators

Stefano Strami, Giovanni Longo, Elio Padoano

3 - Decision-making by "minor anp" for selecting the best business partner

Mei-Chen Lo, Ozaki Toshimasa, Gwo-Hshiung Tzeng

■ TD-13

Tuesday, 14:00-15:20

2.2.21

Emergency facilities location

Chair: *Sibel Salman*

1 - Emergency response facility location in istanbul for effective distribution of relief aid

Selin Ozdinc

2 - Pre-positioning of emergency items worldwide for care international

Serhan Duran, Marco Gutierrez, Pinar Keskinocak

3 - A humanitarian relief logistics model and lagrangean-based solution approach

Alper Döyen, Necati Aras, Gülay Barbarosoglu

4 - Locating emergency response facilities on a network with a linear reliability order of links

Sibel Salman, Refael Hassin, R. Ravi

■ TD-14

Tuesday, 14:00-15:20

2.2.15

Supply Chain Design and Sustainability

Chair: *Charles Corbett*

1 - Modeling and design of cross-docking systems

Georgios Sgoutas, Michael Vidalis, Vassilis Angelis

2 - Supply chain network design with sustainability perspective

Hazal Karaman, Cagatay Mekiker, Sinan Mercan, Orhan Feyzioglu

3 - Carbon footprinting and labeling in a supply chain

Charles Corbett, Chien-Ming Chen, Rob Zuidwijk

■ TD-15

Tuesday, 14:00-15:20

2.2.12

Routing Optimization

Chair: *Christos Tarantilis*

1 - Solving the weekly log-truck routing and scheduling problem

Michel Gendreau, 'Nizar El Hachemi, Louis-Martin Rousseau

2 - A branch-and-price algorithm for the capacitated team orienteering problem

M. Grazia Speranza, Claudia Archetti, Nicola Bianchessi, Nicola Bianchessi

3 - Partial path column generation for the elementary shortest path problem with resource constraints

Mads Kehlet Jepsen, Bjørn Petersen

4 - Towards an exact approach for the capacitated vehicle routing problem

Panagiotis Repoussis, Chrysanthos Gounaris, Christos Tarantilis, Christodoulos Floudas

■ TD-17

Tuesday, 14:00-15:20

1.3.14

Container Terminal Planning II

Chair: *Frank Meisel*

Chair: *Christian Bierwirth*

1 - Effect of resource allocation rules in different layout types of seaport container terminals

Olcay Polat, Osman Kulak, Mustafa Egemen Taner, Hans-Otto Guenther

2 - Terminal planning and optimising via distributed emulation

Holger Schuett

3 - An integrated simulation model for quay and yard operations at gioia tauro terminal

Roberto Trunfio, Pasquale Legato

4 - Analysis and simulation of a port container terminal operating in naples (italy) harbor

Gennaro Improta, Francesco Gargano, Giuseppe Bruno, Andrea Genovese, Cinzia Vinti, Pietro Averaimo

■ TD-18

Tuesday, 14:00-15:20

1.3.15

Decision Analysis in Marketing and Financial Modeling

Chair: *Erik Kropat*

Chair: *Zeev (Vladimir) Volkovich*

Chair: *Gerhard-Wilhelm Weber*

1 - Applying rough set theory constructing customer relationship model for pharmaceutical agents

Tsau-Tang Yang, Hsu-Hua Lee, Chie-Bein Chen, Mei-Hsiu Huang, Wei Ting Cho, Chung-Chang Lien

2 - Strategic investment timing under asymmetric access charge regulation in telecommunications

Takashi Shibata

3 - Classification by archipelago subgraph

Bela Vizvari

■ TD-19

Tuesday, 14:00-15:20

1.3.20

Dynamical Systems

Chair: *João Almeida*

Chair: *Flávio Ferreira*

1 - Pinto's golden tilings

João Almeida

2 - Dynamic thresholds in biology

Alberto A. Pinto

3 - Leadership in a differentiated and uncertain market

Flávio Ferreira, Fernanda A. Ferreira, Alberto A. Pinto

4 - Effects of individual dynamic complexity elements on the overall complexity of a simulation game

Onur Ozgün

■ TD-20

Tuesday, 14:00-15:20

1.3.33A

Cutting and Packing 8

Chair: *J. M. Valério de Carvalho*

1 - A constructive heuristic for the minimization of open stacks problem

Marco Carvalho, Nei Yoshihiro Soma

2 - Sequencing bidimensional guillotine cutting operations considering lateness and raw material utilization

Felipe Lemos, Miguel Cezar Santoro

3 - Pattern cutting and sequencing in a multi-stage production system

Rifat Gürçan Özdemir, Tülin Aktin

4 - Sequencing cutting patterns in order to minimize the stack occupation

Isabel Cristina Lopes, J. M. Valério de Carvalho

■ TD-21

Tuesday, 14:00-15:20

6.2.47

Software for OR/MS II - Open Source

Chair: *Vinícius Armentano*

1 - Open-source software in OR education

Jorge Santos, Luís Caviqne, Armando Mendes

2 - Parallel machine scheduling using free software: an application

António Duarte, J. M. Valério de Carvalho

3 - Consumers and suppliers decision process in information system markets

João Rosário, António Palma dos Reis

■ TD-22

Tuesday, 14:00-15:20

3.1.10

Health Care Policy Making II

Chair: *Jose luis Andrade*

1 - Innovative approach to design decisions on a regional network of clinical laboratories

Jose luis Andrade, Jose M. Framinan, Pedro L. Gonzalez-R

2 - A case-based reasoning system for radiotherapy treatment planning in brain cancer

Rupa Jagannathan, Sanja Petrovic, Angela Mckenna, Louise Newton

3 - Decision support system for warfarin therapy management

Barbaros Yet, Kaveh Bastani, Hendry Raharjo, Svante Lifvergren, Bo Bergman

■ TD-23

Tuesday, 14:00-15:20

6.2.49

MOO: Nonlinear Multi-Objective Optimization Techniques in Action

Chair: *Jussi Hakanen*

Chair: *Kaisa Miettinen*

1 - A synchronous reference point scheme for stochastic multiobjective problems

Mariano Luque, Jose Manuel Cabello, Ana Belen Ruiz, Francisco Ruiz

2 - Gemstone cutting - a tradeoff between beauty and volume

Karl-Heinz Küfer, Anton Winterfeld

3 - An interactive multi-objective approach to heat exchanger network synthesis

Timo Laukkanen, Tor-Martin Tveit, Vesa Ojalehto, Kaisa Miettinen, Carl-Johan Fogelholm

4 - Interactive wastewater treatment plant (wwtp) design by using pareto navigator

Jussi Hakanen, Kaisa Miettinen

■ TD-24

Tuesday, 14:00-15:20

6.2.50

Bioinformatics V

Chair: *Metin Turkey*

1 - Cancer classification using hyper-box enclosure method

Onur Dagliyan, Halil Kavakli, Metin Turkey

2 - Epidemic modeling by mixtures of binomial distributions with susceptible/exposure/infection dependence

Eva Maria Ortega, Isabel Ortega

3 - Assignment problems for medical image registration

Michael Stiglmayr, Kathrin Klamroth

4 - Protein domain networks: analysis of error and attack tolerance under different circumstances

Saziye Deniz Oguz, Hakan Oktem

■ TD-25

Tuesday, 14:00-15:20

6.2.48

Risk Management and Portfolio Optimization III

Chair: *Gerhard-Wilhelm Weber*

1 - Fuzzy portfolio selection using a genetic algorithm

Enriqueta Vercher, José D. Bermúdez, José Vicente Segura

2 - Maxentropic estimation of the failure probability function

Alin Rusu

3 - S&p 500 stocks screening using multiple criteria

Mohsen Bahramgiri

4 - Possibilities of calibrating low-default portfolios with parametric approaches

Vesna Bogojevic Arsic

■ TD-26

Tuesday, 14:00-15:20

3.1.11

Dynamics, statistical inference and algorithms of cooperative game theory

Chair: *Marco Dall'Aglio*

1 - Bayesian inference for weighted voting games

Pierpaolo Brutti, Marco Scarsini

2 - Financial games with external opportunities

Camilla Di Luca, Carles Rafels, Josep M Izquierdo

3 - Algorithms in cooperative fair division

Marco Dall'Aglio, Camilla Di Luca

■ TD-27

Tuesday, 14:00-15:20

8.2.06

URBAN TRAFFIC CONTROL

Chair: *Tobias Pohlmann*

1 - Online offset optimization of traffic lights using vehicle-to-infrastructure communication

Daniel Schmidt, Tchouankem Hugues

2 - Decentralized decision support and coordination of autonomous vehicles based on online data mining techniques

Maksims Fiosins, Jana Görmer, Jan Fabian Ehmke

3 - Optimisation of signal change intervals from a capacity point of view

Axel Wolfermann

4 - Model-based adaptive traffic control employing genetic algorithms

Tobias Pohlmann, Bernhard Friedrich

■ TD-28

Tuesday, 14:00-15:20

8.2.10

Scheduling in Health Care

Chair: *Dobriła Petrovic*

1 - Scheduling treatment at a rehabilitation hospital

Richard M Wood, Jeff Griffiths, Janet Williams

2 - Heuristics for planning elective surgeries

Inês Marques, Maria Eugénia Captivo, Margarida Pato

3 - Heuristics for radiotherapy scheduling

Dobriła Petrovic, Truword Kapamara

4 - Operating room planning and scheduling: a multi-objective model solved via a genetic algorithm

Rosita Guido, Domenico Conforti, Francesca Guerriero

■ TD-29

Tuesday, 14:00-15:20

8.2.11

Preference Learning I

Chair: *Roman Slowinski*

1 - Learning of rule preference models for a mixture of non-ordinal and ordinal attributes

Jerzy Blaszczynski, Salvatore Greco, Roman Slowinski

2 - Conditional ranking on relational data

Willem Waegeman, Tapio Pahikkala, Antti Airola, Tapio Salakoski, Bernard De Baets

3 - How to establish a mathematical relationship between temperament and competences ? from a classification problem to a label ranking problem.

Massimo Gurrieri, Philippe Fortemps

4 - Evolutionary fuzzy rules for binary classification problems with preferences

Christian Moewes, Roman Slowinski, Izabela Szczech, Rudolf Kruse

■ TD-30

Tuesday, 14:00-15:20

8.2.13

MCDM 1

Chair: *Denis Yannacopoulos*

1 - Predictive maintenance program audit by means of a multicriteria decision support methodology

Maria Carmen Carnero, Mónica Oliveira, Carlos Bana e Costa

2 - A multicriteria ordinal measurement method to customer satisfaction evaluation: moments

Isabel M. Joao, Carlos Bana e Costa

3 - Citizens' satisfaction from the public services: a multicriteria approach

Denis Yannacopoulos, Panagiotis Manolitzas, Nikos Tsotsolas, Dimitrios Drosos

■ TD-31

Tuesday, 14:00-15:20

8.2.15

OR based Decision Support by Fraunhofer Society

Chair: *Sascha Herrmann*

1 - System-assisted cooperation of independent freight forwarding offices

Jens Wollenweber

2 - A decision support system for waste management organizations

Sascha Herrmann

3 - Optimal scheduling of transports with interdependent resources for the advanced truckload concept

Bettina Berning

4 - Carp of urban municipal solid waste collection

Volker Engels

■ TD-32

Tuesday, 14:00-15:20

8.2.17

OR in Forest Management

Chair: *Raul Brás*

1 - Dynamic log yard designs for an improved coordination of sawmill and log yard operations

Luc LeBel

2 - On the validation of an occurrence forest fire index on a mediterranean region

Fortunato Crespo Abril, Javier de Vicente

3 - Two variable selection methods for fuzzy regression model

Barbara Gladysz, Dorota Kuchta

4 - A modified Steiner forest problem with applications in conservation biology

Raul Brás, J. Orestes Cerdeira, Diogo Alagador, Maria Triviño, Mar Cabeza, Miguel Araújo

■ TD-33

Tuesday, 14:00-15:20

8.2.19

Modelling of uncertainties in the energy sector (short-term planning)

Chair: *Christoph Weber*

1 - Efficient treatment of the stochastic unit commitment problem for long-term planning studies

Alexander Sturt, Goran Strbac

2 - Spot-based storage valuation using a multi-factor price process

Alexander Boogert, Cyriel de Jong

3 - Modelling electricity prices in the selected regions: linear vs non-linear auto-regressive models

Jiri Valecky, Miroslav Culik

4 - Evaluation of energy technologies based on stochastic price simulations

Dogan Keles, Dominik Möst, Wolf Fichtner

■ TD-34

Tuesday, 14:00-15:20

8.2.23

Generalized Convexity II

Chair: *Zsolt Pales*

- 1 - **Geometric approach to approximating the solution of a class of generalized convex optimization problems**

Gabriela Cristescu, Mihail G?ianu

- 2 - **Sufficient efficiency conditions for multiobjective fractional programming with generalized type-i-univexity**

Andreea Madalina Stancu, Ioan Stancu-Minasian

- 3 - **New method of homotopy approximation for solving linear and nonlinear problems**

Mohamad Hosein Kafash

■ TD-35

Tuesday, 14:00-15:20

6.2.46

Facilitated Discrete-Event Simulation

Chair: *Stewart Robinson*

1 - Challenges for discrete-event simulation as a facilitative modelling tool

Stewart Robinson

2 - A participative modelling framework for health care simulation studies

Antuela Tako, Kathy Kotiadis, Christos Vasilakis

3 - Participative simulation as a pragmatic tool to facilitate problem solving

Tillal Eldabi

■ TD-36

Tuesday, 14:00-15:20

3.1.05

Fuzzy Decision Making

Chair: *Miroslav Hudec*

1 - Paraconsistent annotated evidencial logic et and decision making method in fuzzy set theory

Fábio Romeu de Carvalho, Jair Minoro Abe

2 - Introducing and managing uncertainty in performance measurement systems

Sergio Sousa, Eusebio Nunes

3 - Decision makers weighting in fuzzy multiple attributes group decision making

Mohsen Rostamy-Malkhalifeh, Fateme Ghaemi Nasab, Raziieh Mehrjoo

4 - A fuzzy model for single-period inventory problem with pre-season extension

Hülya Behret

■ TD-37

Tuesday, 14:00-15:20

3.1.09

Applications in Decision Making & Decision Analysis

Chair: *Pascale Zaraté*

Chair: *Fatima Dargam*

1 - Survey forest fire detection systems via multicriteria disaggregation — aggregation approach: the case of lycabettus hill

Athanasios Spyridakos, Yannis Psaromiligkos, Lazaros Vryzidis, Maria Litsardaki, Ioannis Salmon

2 - The probe decision support system and capital budgeting: an application to the electricity sector

João Carlos Lourenço, Carlos Bana e Costa, João Oliveira Soares

3 - Search analysis to locate a sustainable data center in portugal using geographic information systems

Luis C. Dias, Miguel Covas, Carlos Santos Silva

4 - How does the euro working group on dss interact? a social-academic network analysis 1989-2008

Fatima Dargam, Rita Ribeiro, Pascale Zaraté

■ TD-38

Tuesday, 14:00-15:20

6.2.44

Stochastic Valuation of Energy Prices and Derivatives

Chair: *Nadia Maïzi*

Chair: *Pourtallier Odile*

Chair: *Martin Rainer*

1 - Robust pricing in electricity markets with a variable demand

Eugene Zak, Kwok Cheung, Ricardo Rios-Zalapa

2 - Determining market clearing prices for coupled day-ahead energy markets

Johannes Müller, Alexander Martin, Sebastian Pokutta

3 - Indifference price for emission permits

Olivier Davidau, Mireille Bossy, Nadia Maïzi, Pourtallier Odile

■ TD-39

Tuesday, 14:00-15:20

6.2.45

Optimal Control: Recent Advances II

Chair: *Gustav Feichtinger*

- 1 - Local ramp metering control based on a coupling of continuum traffic flow models with reinforcement learning**

Salissou Moutari, Barry McCollum

- 2 - Optimal control for spacecraft orbital transfer maneuver**

M. Navabi, M. Sanatifar

- 3 - A new branch and bound based method dedicated to minimize the energy consumption of an electric vehicle.**

Merakeb Abdelkader, Frederic Messine

■ TD-40

Tuesday, 14:00-15:20

6.2.52

Port Simulation and Optimization

Chair: *Yue Wu*

Chair: *Jing-An Li*

1 - Modeling of vehicle scheduling and storage problems for import containers

Jiabin Luo, Yue Wu, Dali Zhang

2 - Optimal pricing strategies for empty container management

Jing-An Li

3 - Simulation based evaluation of container terminal yard layouts

Jörg Wiese, Leena Suhl, Natalia Kliewer

4 - Generic port operations simulator

Rui Carlos Botter, Afonso Celso Medina

■ TD-41

Tuesday, 14:00-15:20

3.1.06

Applications of System Dynamics Modeling III

Chair: *Gisele Bosso de Freitas*

1 - Diffusion equation, growth and diagnosis of tumor aggressiveness

Gisele Bosso de Freitas, Elso Drigo Filho

2 - Optimization of resources for a behavior controlled of petri nets with multipliers in dioid algebra

Samir Hamaci, Rahim Benfkir

3 - Collective animal manure management simulation and environmental impact assessment

Francois Guerrin

■ TD-42

Tuesday, 14:00-15:20

3.1.07

Decision Making 1

Chair: *Alan French*

1 - Tail restricted stochastic dominance (trsd): a class for quasi stochastic dominance

Edgar Elias Osuna

2 - Decision-making process: amateurs and professionals

Mohammad Emambocus

3 - Measuring changes in brand knowledge/perception using brand concept mapping

Alan French, Gareth Smith

4 - A combined method to deal with conflicting software requirements

Catarina Gomes, Rita Ribeiro

■ TD-43

Tuesday, 14:00-15:20

8.2.02

Global Optimization 2

Chair: *Mirjam Duer*

1 - An approach to constrained global optimization based on exact penalty functions

Francesco Rinaldi, Gianni Di Pillo, Stefano Lucidi

2 - Test-problem generator for unconstrained global optimization

Chi-Kong Ng, Duan Li

3 - Certificates for copositive programming

Immanuel Bomze

4 - Some new results on copositive programming

Mirjam Duer

■ TD-44

Tuesday, 14:00-15:20

8.2.03

Business Process Modelling and Simulation

Chair: *Miro Gradisar*

1 - Probability of default simulation: managing predictive analytics processes in a multi-model system

Igor Perko, Miro Gradisar, Samo Bobek

2 - Business process simulation for solving large cutting problems

Mihael Cesar, Jure Erjavec, Miro Gradisar

3 - Cutting stock problem as a part of a business process

Jure Erjavec, Miro Gradisar

4 - Cash flow modeling and optimization in road network building

Marko ?etinc, Miro Gradisar

■ TD-45

Tuesday, 14:00-15:20

8.2.12

OR in Military II

Chair: *Ana Isabel Barros*

1 - A robust approach to the missile defence location problem

Lanah Evers, Axel Bloemen, Ana Isabel Barros, Herman Monsuur, Albert Wagelmans

2 - Development of a joint picture for domestic domain awareness

Mark Gammon

3 - Uav's mission operation simulation

Dusan Starcevic

4 - A search game with incomplete information on a searcher's detection capability

Hideki Higuchi, Ryusuke Hohzaki, Toru Komiya, Emiko Fukuda

■ TD-46

Tuesday, 14:00-15:20

8.2.14

Agent-based Modeling II

Chair: *Massimo Genoese*

- 1 - An agent-based electricity demand model for the distribution grid. case study premio-capenergies project**

Enrique Kremers, Alvaro Gómez Ibañez, Pablo Viejo, Sophie Chartres

- 2 - Stable distributions in agent-based model and asset liability management**

Vadym Omelchenko, Vladimir Gurzhiy

- 3 - Supply chains and multiple marginalization: a study using multi-agent simulation**

Jan Zouhar

- 4 - A generic agent-based framework for cooperative hybrid meta-heuristic search**

Simon Martin, Djamila Ouelhadj, Patrick Beullens, Ender Ozcan

■ TD-47

Tuesday, 14:00-15:20

8.2.16

Optimization in Water Systems I

Chair: *Mathias Höfer*

Chair: *Halil Önder*

Chair: *Frederik Blank*

1 - Optimization of booster disinfection station scheduling

Caglayan Sert, Ayşe Burcu Altan Sakarya

2 - Optimum design of slurry pipelines

Burhan Yıldız, Ayşe Burcu Altan Sakarya, Metin Ger

3 - Online pressure optimization in water distribution networks

Frederik Blank, Mathias Höfer, Rüdiger Franke, Markus Gauder

■ TD-48

Tuesday, 14:00-15:20

8.2.04

Multi-Objective Optimization

Chair: *Lino Costa*

1 - Nonlinear multi-objective integer programming: a general approach for optimization

Melih Özlen, Meral Azizolu

2 - Multiobjective optimization based on the cone of efficient directions and multiobjective golden section algorithm

Douglas Vieira, Adriano Lisboa, Rodney Saldanha

3 - Integrating Taylor's expansion on the lexicographic approach for unconstrained optimization

Christina D. Nikolakakou, Theodoula N. Grapsa, George S. Androulakis

4 - Optimality in multiobjective programming under generalized invexity

Hachem Slimani, Mohammed Said Radjef

■ TE-01

Tuesday, 15:40-17:00

Aula Magna

Plenary Talk 2

Chair: *Silvano Martello*

1 - A tale of three eras: the discovery and rediscovery of the hungarian method

Harold W. Kuhn

■ TF-03

Tuesday, 17:20-18:40

3.2.15

Location problems

Chair: *Manuel Laguna*

Chair: *Javier Alcaraz*

1 - Approximation algorithms for the competitive facility location problem

Vladimir Beresnev

2 - Solving a location problem with advanced metaheuristics

Javier Alcaraz, Mercedes Landete, Juan Francisco Monge

3 - A grouping genetic algorithm for the capacitated facility location problem

Diptesh Ghosh, Megha Sharma

■ TF-04

Tuesday, 17:20-18:40

3.2.13

Airline applications

Chair: *Elaine Wong*

Chair: *Pasu Ratprasert*

1 - Ant colony optimization applied on weekly fleet assignment with time window model

Pasu Ratprasert

2 - Exploiting metaheuristics to optimize performance-based logistics contracts for mro services

Elaine Wong, Zhichao Zheng, Arnd Schirrmann

3 - Stochastic airport gate assignment problem

Merve ?eker, Nilay Noyan

■ TF-05

Tuesday, 17:20-18:40

3.2.16

Meet the Editors of EJOR

Chair: *Gerard Wanrooy*

1 - Meet the editors of eJor

Roman Slowinski, Jesus Artalejo, Jean-Charles Billaut, Robert Dyson, Lorenzo Peccati

■ TF-06

Tuesday, 17:20-18:40

8.2.30

DEA Application IV — Quality of Life and development

Chair: *Juan Ventura*

- 1 - Evaluation of performance of european cities with the aim to promote quality of life improvements**

Paulo Morais, Ana Camanho

- 2 - Optimal national resource allocation for multi-factor development: cross-country analysis based on DEA**

Abdel Latef Anouze, Neil Yorke-Smith

- 3 - Assessment of quality of life using value efficiency analysis: the importance of the geographic level of analysis**

Eduardo Gonzalez, Ana Cárcaba, Juan Ventura

■ TF-07

Tuesday, 17:20-18:40

8.2.47

Scheduling Applications

Chair: *Malgorzata Sterna*

1 - Scheduling mapreduce computations

Maciej Drozdowski, Joanna Berlinska

2 - Scheduling re-entrant jobs in the car factory paint shop

Grzegorz Pawlak

3 - Balancing and equalizing problem of assembly lines

Waldemar Grzechca

4 - Reflecting scheduling goals with due date involving criteria

Malgorzata Sterna

■ TF-08

Tuesday, 17:20-18:40

6.1.36

Scheduling with Uncertainties

Chair: *Andreas Ernst*

1 - Algebra of uncertain variables applied to task scheduling

Maciej Hojda

2 - Dynamic programming approximations for a stochastic machine scheduling problem

Débora Ronconi, Warren Powell

3 - An exact solution algorithm for parallel machine scheduling with stochastic release dates

Andreas Ernst, Gaurav Singh

■ TF-09

Tuesday, 17:20-18:40

6.2.53

Various Aspects of Modern Mathematical Programming

Chair: *Gerhard-Wilhelm Weber*

Chair: *Armin Fügenschuh*

1 - A new disaggregated formulation of the generalized assignment problem and its associated inequalities

Ishwar Murthy

2 - Feasibility of integer knapsacks and lattice problems

Iskander Aliev

3 - Finding all the vertices of a convex polyhedral set

Israfil Roshdi, Mostafa Davtalab Olyaie

■ TF-10

Tuesday, 17:20-18:40

6.2.56

OR in Sports 2

Chair: *Anastasios Oikonomidis*

- 1 - Subjective judgment vs market idiosyncrasies; exploring influences on the favourite longshot bias in European betting markets**

Anastasios Oikonomidis, Johnnie Johnson

■ TF-11

Tuesday, 17:20-18:40

8.2.38

Structural Equation Modelling Approach in User Acceptance of Information Technology II

Chair: *Sevgi Ozkan*

1 - An investigation into the acceptance of mobile banking by turkish consumers

Gülgin Afacan, Sevgi Ozkan

2 - Factors influencing users' adoption of technology: empirical investigations in different contexts using structural equation modeling approach

Sevgi Ozkan, Irfan Emrah Kanat, Emre Sezgin, Yasemin Çetin, Duygu Findik, Oguzhan Alasehir, Nurcan Alki?

3 - What is available about technology acceptance of e-learning software and systems? a review and comprehension study

Mustafa Degerli, Sevgi Ozkan

4 - Evaluating user acceptance of Internet banking service in Turkey

Mustafa Aydin, Sevgi Ozkan, Arif Yilmaz

■ TF-12

Tuesday, 17:20-18:40

8.2.39

ANP 05

Chair: *Yi-Chun Chen*

- 1 - Improving the career-change tendency for hot-spring hotels using dominance-base rough set approach**

Yi-Chun Chen, Gwo-Hshiung Tzeng

- 2 - A decision rules approach for marketing improvement of European art tour participants from taiwan**

Yi-Chun Chen, Gwo-Hshiung Tzeng

- 3 - Constructing the learning criteria of basic system for community industry development based on dematel technique with MCDM model**

Yi-Chun Chen, Gwo-Hshiung Tzeng

- 4 - A hybrid MCDM model combing dematel-based ANP with vikor for establishing the best management systems of transformation-learning community industry**

Yi-Chun Chen, Gwo-Hshiung Tzeng

■ TF-13

Tuesday, 17:20-18:40

2.2.21

Competitive Location

Chair: *Dolores R. Santos-Peñate*

1 - A competitive location model with demand uncertainty

Tolga Seyhan, Lawrence Snyder

2 - Incorporating inventory decisions in competitive location models

Francisco Silva, Helena Ramalhinho Lourenço

3 - A new method for the location and design of multiple new facilities in the competitive market

Nasreddine Saidani, Feng Chu, Chen Haoxun

4 - An lp-pso matheuristic to solve the leader-follower problem

Dolores R. Santos-Peñate, Clara M. Campos, José A. Moreno-Pérez, Rafael Suarez-Vega

■ TF-15

Tuesday, 17:20-18:40

2.2.12

Vehicle Routing Applications I

Chair: *M. Grazia Speranza*

1 - Periodic vehicle routing and scheduling for end-of-life product collection

Yeliz Akca, Sibel Salman, Onur Kaya, Deniz Aksen

2 - Collection and recycling of weee facilities location

Jorge Pereira, Simão Ribeiro, Joel Carvalho, José Oliveira, Manuel Figueiredo, José Telhada, Luis Dias

3 - An exact algorithm for the vehicle routing problem with stochastic demands

Michel Gendreau, Walter Rei

■ TF-16

Tuesday, 17:20-18:40

2.2.14

Optimization Methods for Railway Freight Transportation

Chair: *Armin Fügenschuh*

1 - A branch and generate heuristic (bang) to solve large-scale train timetabling problems

Thomas Schlechte, Ralf Borndörfer, Steffen Weider

2 - Modeling and optimizing the simplon railway corridor

Elmar Swarat, Ralf Borndörfer, Thomas Schlechte

3 - Single car routing in rail freight transport

Armin Fügenschuh, Henning Homfeld, Alexander Martin, Hanno Schülldorf

4 - Optimized fleet management of ballast supply railcars

François Ramond, Francis Sourd, Lionel Lagarde, Pierrick Vallat

■ TF-17

Tuesday, 17:20-18:40

1.3.14

Technologies for Collaborative Planning

Chair: *Melanie Bloos*

- 1 - **A survey of electronic transportation marketplaces in germany: how can it-innovation promote collaborative transportation planning**

Michael Schwind, Susanne Aponte, Andreas Stenger

- 2 - **A proposal of autonomous agents' implementation for the maritime logistics of manufactured products**

Vanina Macowski Durski Silva, Antonio G.N. Novaes, Antônio Coelho

- 3 - **Minimizing co2-emmissions in transportation logistics via autonomous co-operation? insights from a stylized model**

Richard Colmorn, Olivier Gallay, Philip Cordes, Max-Olivier Hongler, Michael Hülsmann

- 4 - **Auction-based request re-allocation in large-scale transport cooperations considering cost and quality**

Tobias Buer, Giselher Pankratz

■ TF-18

Tuesday, 17:20-18:40

1.3.15

Data Mining and Knowledge Representation

Chair: *Zeev (Vladimir) Volkovich*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Erik Kropat*

1 - Comparing partitions: visual aids

Margarida Cardoso, Ana Alexandra Martins

2 - On the efficiency of spectral clustering : interpretation, parallel computation and results

Sandrine Mouysset, Joseph Noailles, Daniel Ruiz

3 - Whibo - a platform for component-based design of partitioning cluster algorithms

Kathrin Kirchner, Boris Delibasic, Milos Jovanovic, Milan Vukicevic, Johannes Ruhland

4 - On the structural analysis of inventory problems with inventory-dependent demand

Frank Y Chen

■ TF-20

Tuesday, 17:20-18:40

1.3.33A

Cutting and Packing 9

Chair: *A. Miguel Gomes*

1 - Multilevel cutting optimisation with production costs in practice

Helmut Schreck

2 - A mathematical programming approach for retail space planning

Gabriel Tavares

■ TF-21

Tuesday, 17:20-18:40

6.2.47

Software for OR/MS III

Chair: *Gordon Dash*

1 - Siopred web platform: a web application for automatic forecasting of time series

Francesc Silva, José D. Bermúdez, José Vicente Segura, Enriqueta Vercher, Ana Corberan

2 - Software for bound-constraint minimization

Ernesto G. Birgin

3 - Optimizing automated share trading using winorse-ai: cognitive decision theory and high frequency artificial neural networks

Gordon Dash, Nina Kajiji

■ TF-22

Tuesday, 17:20-18:40

3.1.10

Health Care Policy Making III

Chair: *Amílcar Arantes*

- 1 - Procurement strategies in the health sector — how advanced are procurement processes in Portuguese hospitals?**

Stephan Messner, Amílcar Arantes

- 2 - Binary matrix decompositions without tongue-and-groove underdosage for radiation therapy planning**

Celine Engelbeen, Antje Kiesel

- 3 - Lean healthcare in Portuguese hospitals — a case study**

Luis Ferreira, Filipe Simões

■ TF-23

Tuesday, 17:20-18:40

6.2.49

MOO: Multiple Criteria Approaches in Mathematical Finance

Chair: *Frank Heyde*

1 - Modelling a private equity fund

Johannes Tannert

2 - A set-valued approach to minimizing risks in markets with transaction costs

Andreas Hamel

3 - Duality for bicriteria portfolio optimization using average value at risk

Frank Heyde, Andreas Löhne, Christiane Tammer, Mandy Werfel

4 - Strong kkt conditions in convex vector optimization

Joydeep Dutta, Regina Burachik

■ TF-24

Tuesday, 17:20-18:40

6.2.50

Workforce Scheduling 1

Chair: *Joao Telhada*

1 - Understanding an operations research customer — OR not

Kimmo Nurmi, Jari Kyngas

2 - Alternative mip formulations for an integrated shift scheduling and rostering problem

Joao Telhada, Ana Godinho

■ TF-25

Tuesday, 17:20-18:40

6.2.48

ROADEF/EURO challenge junior session 1

Chair: *Christian Artigues*

1 - An evolution based algorithm for a large scale energy management problem

Mustafa Kerim Y?lmaz, Mustafa Tacettin, Ahmet Cihan

2 - RoadeF/euro challenge 2010: a constructive heuristic for large-scale energy management problem with varied constraints

Murat Firat

3 - An aco/vns hybrid approach for a large-scale energy management problem

Roman Steiner, Günther Raidl, Sandro Pirkwieser, Matthias Prandtstetter

■ TF-26

Tuesday, 17:20-18:40

3.1.11

Cooperative situations on networks: algorithms and applications

Chair: *Stefano Moretti*

1 - The g-game: a cooperative game approach for resource consolidation in network dimensioning

Aruna Prem Bianzino, Stefano Moretti, Dario Rossi, Jean-Louis Rougier

2 - Cost sharing in shortest path tree games (sptgs)

Nayat Horozoglu, Katerina Papadaki

3 - Bargaining games with arbitration committee

Vladimir Mazalov, Julia Tokareva

4 - Coalitional games on biological networks to measure the power of genes

Stefano Moretti, Vito Fragnelli, Fioravante Patrone, Stefano Bonassi

■ TF-27

Tuesday, 17:20-18:40

8.2.06

LOGISTICS 1

Chair: *Klaus-Christian Maassen*

1 - A multi-agent negotiation protocol for freight carrier coordination

Gianluca De Pascale, Alessandro Agnetis

2 - An expanded template for the hosting of contemporary auctions for freight services

Dimitrios Emiris, Charis Marentakis

3 - Pattern-based evacuation planning for urban areas

Sarah Bretschneider, Alf Kimms

4 - A fast heuristic approach for large scale cell-transmission-based evacuation planning

Klaus-Christian Maassen, Alf Kimms

■ TF-28

Tuesday, 17:20-18:40

8.2.10

Decentralized scheduling

Chair: *Hoong Chuin Lau*

1 - Decentralized resource allocation and scheduling via walrasian auctions with negotiable agents

Hoong Chuin Lau

2 - Market-based scheduling at container terminals

Clemens van Dinther, Andreas Hudelmaier

3 - Operational transport planning and scheduling

Cees Witteveen, Jonne Zutt

4 - Scalable decentralised approaches for job shop scheduling

Patrick De Causmaecker, Ann Nowe, Katja Verbeeck, Tony Wauters, Yailen Martinez

■ TF-29

Tuesday, 17:20-18:40

8.2.11

Risk measurement and management

Chair: *Umberto Triulzi*

1 - Cds signaling

Rita D'Ecclesia

2 - Nonlinearity in electricity price series: a setarx approach

Carlo Lucheroni

3 - Using euro zone sovereign debt etfs as portfolio constituents

Mikica Drenovak

4 - The efficiency of greek pension fund portfolios. an empirical approach

Alexandros Koulis, Christina Beneki, Maria Adam, Charalampos Botsaris

■ TF-30

Tuesday, 17:20-18:40

8.2.13

MCDM 2

Chair: *Nadia Sami*

1 - Towards the integration of the multi criteria decision aid in the olap process

Nadia Sami, Abdessadek Tikniouine

2 - Multi-criteria decision analysis and optimization methods in supporting sustainable use of natural resources

Tanja Myllyviita, Teppo Hujala, Annika Kangas, Pekka Leskinen

3 - Lessons from two recent major MCDA projects

David Collier

4 - The effect of customer satisfaction on financial performance: the case of mobile companies in greece

Dimitrios Drosos, Nikos Tsotsolas, Panagiotis Manolitzas, Denis Yannacopoulos

■ TF-31

Tuesday, 17:20-18:40

8.2.15

Communication Network Design

Chair: *Carlo Mannino*

1 - Models for ftx network planning

Axel Werner

2 - Solving a robust network loading problem - models, inequalities and computations

Christian Raack

3 - Self-organization within lte networks: soft integration of new base

Andreas Eisenblätter

4 - The robust network loading problem with dynamic routing

Sara Mattia

■ TF-32

Tuesday, 17:20-18:40

8.2.17

OR & Water Management

Chair: *Janne Helin*

1 - Multicriteria decision support system for surface irrigation design. application to ras-el-ain irrigation district, syria

Hanaa Darouich, José Manuel Gonçalves, André Muga, Paula Paredes, Luis S. Pereira

2 - Gis-based water distribution schedule for agriculture in madeira island

João Carlos Sousa, Joao Telhada, José Paixão

3 - Multiobjective sustainable water management in alentejo region

Vladimir Bushenkov, Rui Fragoso, Carlos Marques

4 - Manure transport model for water protection of pig farms

Janne Helin

■ TF-33

Tuesday, 17:20-18:40

8.2.19

Optimality of alternative policy instruments for climate and energy policies

Chair: *Pekka Pirilä*

1 - Adaptation and mitigation strategies in the European power sector

Anne Held, Ulrich Reiter, Mario Ragwitz

2 - Choosing policy instruments under influence of uncertain technological change and adaptation

Pekka Pirilä

3 - Long term climate mitigation and the impact of the treatment of uncertainty

Ilkka Keppo

■ TF-34

Tuesday, 17:20-18:40

8.2.23

Generalized Convexity and Related Topics

Chair: *Gabriela Cristescu*

1 - Separation theorem for nonlinear inverse images of convex sets

Zsolt Pales, Szabolcs Bajak

2 - On wright convexity of higher order

Gyula Maksa, Zsolt Pales

3 - Subquadratic functions

Attila Gilanyi, Csaba Kezi, Katarzyna Troczka-Pawelec

4 - Abstract convexity for convex along lines functions

Giovanni Paolo Crespi, Ivan Ginchev, Matteo Rocca, Alexander Rubinov

■ TF-35

Tuesday, 17:20-18:40

6.2.46

Recent advances in mixed-integer nonlinear and global optimization

Chair: *Chris Floudas*

1 - Global optimization of signomial geometric programming problems

Pedro Castro, João Teles, Henrique Matos

2 - New formulations for the mixture design problem

Claire Adjiman

3 - A mixed-integer quadratic approximation algorithm for the solution of multiparametric mixed-integer nonlinear programming problems

Efstratios Pistikopoulos, Luis Dominguez

4 - Global optimization of large scale quadratically constrained minlp models

Christodoulos Floudas

■ TF-36

Tuesday, 17:20-18:40

3.1.05

Robust Optimization

Chair: *Daniel Kuhn*

1 - Multistage stochastic portfolio optimization in deregulated electricity markets using linear decision rules

Paula Rocha, Daniel Kuhn

2 - Linearly adjustable international portfolio optimization

Raquel Fonseca, Daniel Kuhn, Berc Rustem

3 - Interdicting a project to develop nuclear weapons

Wolfram Wiesemann, Daniel Kuhn, Berc Rustem

■ TF-37

Tuesday, 17:20-18:40

3.1.09

'MCDA & uncertainty

Chair: *Sarah Ben Amor*

1 - A general framework for integrating imperfect information in the promethee methods

Sarah Ben Amor, Bertrand Mareschal

2 - Pre-posterior analysis for additional information in a multiple criteria context with information imperfections

Sarah Ben Amor, Kazimierz Zaras, Jean-Marc Martel

■ TF-40

Tuesday, 17:20-18:40

6.2.52

Operation Planning and Control in Container Terminals

Chair: *Kap Hwan Kim*

Chair: *Loo Hay Lee*

1 - Dynamic yard storage strategy for container terminal

Loo Hay Lee, Ek Peng Chew, Xinjia Jiang

2 - Dispatching vehicles supporting multi-lift operations of quay cranes

Kap Hwan Kim, Vu Duc Nguyen

3 - Online rules for container stacking at an import terminal

Eelco van Asperen, Rommert Dekker

4 - Minimizing the makespan of container storages and retrievals

Amir Hossein Gharehgozli, Yugang Yu, René de Koster, Jan Tijmen Udding

■ TF-42

Tuesday, 17:20-18:40

3.1.07

Decision Making 2

Chair: *Jessika Grunwald*

1 - Opportunities for decision support in telematic acute stroke care

Jessika Grunwald, Peter Knüppel

2 - The analysis of the innovation performance of the countries through Bayesian causal map

Fusun Ulengin, Sule Onsel, Gündüz Ulusoy, Emel Aktas, Özgür Kabak

3 - Tactical mission planning

Nils-Hassan Quttineh, Kristian Lundberg, Kaj Holmberg

4 - Expanding the process of knowledge discovery in databases to advance the quality of prediction

Claudia Koschtial, Carsten Felden

■ TF-43

Tuesday, 17:20-18:40

8.2.02

Simplicial methods in Global Optimization

Chair: *Eligius M.T. Hendrix*

1 - Global optimization with simplicial partitions and lipschitz bounds

Julius Zilinskas, Antanas Zilinskas

2 - The minimum volume simplex problem applied to spectral unmixing

Eligius M.T. Hendrix, I. Garcia

3 - Global optimization of lipschitz differentiable functions

Dmitri Kvasov, Yaroslav Sergeyev

4 - Solving the minimum sum-of-squares clustering problem by hyperbolic smoothing and partition into boundary and gravitational regions

Adilson Elias Xavier, Vinicius Layter Xavier

■ TF-44

Tuesday, 17:20-18:40

8.2.03

Vector and Set-Valued Optimization I

Chair: *Elena Molho*

1 - Optimality conditions in scalar and vector optimization using a new second order directional derivative

Bienvenido Jiménez, César Gutiérrez, Vicente Novo

2 - Stopping criteria for a general model of genetic algorithm with applications to multiobjective optimization

Marcin Studniarski

3 - Efficiency in v-kt- pseudoconvex control problems

Manuel Arana-Jiménez, Gabriel Ruiz-Garzón, Antonio Rufián-Lizana, Rafaela Osuna-Gómez

4 - An interior point method for linearly constrained multiobjective optimization without a priori scalarization

Elena Molho, Enrico Miglierina, Maria Cristina Recchioni

■ TF-46

Tuesday, 17:20-18:40

8.2.14

Probabilistic Constrained Stochastic Programming

Chair: *Andras Prekopa*

- 1 - **Stochastic network design with normally distributed random demands and arc capacities.**

Olga Myndyuk, Andras Prekopa

- 2 - **Uniform quasi-concavity in probabilistic constrained programming**

Kunikazu Yoda, Andras Prekopa

- 3 - **A new method for the valuation of bermuda options using univariate numerical integration and bounding.**

Mariya Naumova

- 4 - **Solution of a stochastic network design problem with probabilistic constraint and discrete random variables**

Andras Prekopa, Merve Unuvar

■ TF-47

Tuesday, 17:20-18:40

8.2.16

Optimization in Water Systems II

Chair: *Halil Önder*

Chair: *Maria Cunha*

1 - Optism — a decision model for the optimal operation of multisource water supply systems

João Vieira, Maria Cunha, Luís Nunes, José Monteiro, Luís Ribeiro, Tibor Stigter, João Nascimento, Helena Lucas

2 - Agricultural adaptation in a changing climate: optimising multiple objectives

Olivier Crespo, Mark Tadross, Peter Thorburn

3 - Decision support for wastewater systems planning at regional level

João Zeferino, Antonio Antunes, Maria Cunha

■ TF-48

Tuesday, 17:20-18:40

8.2.04

Nonlinear Optimization and Applications 2

Chair: *Edite M.G.P. Fernandes*

1 - Measure theory approach in sliding mode control for nonlinear systems

Mohammad Reza Zarrabi, Mohammad Hadi Farahi

2 - A new approach using interior point method with relaxation based upon modified logarithmic barrier

Mayk Coelho, Aurelio Oliveira, Anesio Santos

■ **WA-02**

Wednesday, 9:00-10:20

3.2.14

Keynote Talk 9

Chair: *M. Grazia Speranza*

1 - A combinatorial approach to secondary spectrum auctions

Berthold Vöcking

■ WA-04

Wednesday, 9:00-10:20

3.2.13

Resource sizing and allocation

Chair: *Farouk Yalaoui*

Chair: *Simge Yelkenci*

1 - Buffer allocation in unreliable production lines using adaptive tabu search approach

Leyla Demir, Semra Tunali

2 - Investigating multi-objective buffer allocation problem in unreliable production systems using a modified artificial immune system algorithm

Yamani Massim, Farouk Yalaoui, Lionel Amodeo, Alice Yalaoui, Abdelkader Zebblah

3 - A hybrid method combining genetic algorithm and simulation for buffer size allocation in a real manufacturing system

Simge Yelkenci, Semra Tunali

■ WA-05

Wednesday, 9:00-10:20

3.2.16

Networks

Chair: *Roberto Battiti*

Chair: *João Claro*

1 - Genetic algorithm approach for network intrusion detection using mobile agent

Khaled Sellami, Mohamed Ahmed-nacer, Lynda Sellami

2 - A multiobjective approach for rapid transit network design

Erdem Gundogdu, Orhan Feyzioglu

3 - Simultaneous design of urban road and public transit networks using hybrid evolutionary metaheuristics

Elnaz Miandoabchi, Reza Zanjirani Farahani

4 - Mean-risk multistage transmission network expansion planning using multiobjective local search

João Claro, A. Miguel Gomes

■ WA-06

Wednesday, 9:00-10:20

8.2.30

DEA Application V — Industry and natural resources

Chair: *Vania Sena*

1 - Data envelopment analysis for privatizing decisions of sugar factories

Ezgi Aktar Demirtas, Abdullah Korkut Üstün

2 - Technical and economic efficiency analysis applied to artisanal fisheries

Manuela Maria Oliveira, Ana Camanho, Miguel Gaspar

3 - Efficiency of public forestry firms in switzerland

Alexander Mack, Bernur Acikgoz

4 - Productivity change of textile and clothing firms in world regions with an application of Malmquist index with bootstrap

Magdalena Kapelko

■ WA-07

Wednesday, 9:00-10:20

8.2.47

Project scheduling

Chair: *Willy Herroelen*

1 - Project scheduling in the financial management of supply chains

Bajis Dodin, Abdelghani Elimam

2 - Tactical risk management in the construction industry

Stefan Creemers, Filip Deblaere, Erik Demeulemeester, Stijn Van de Vonder

3 - Applying critical chain scheduling and buffer management on the discrete time/resource trade-off problem

Erik Demeulemeester, Wendi Tian

4 - Robust optimization for resource-constrained project scheduling with uncertain activity durations

Christian Artigues, Roel Leus, Fabrice Talla Nobibon

■ WA-08

Wednesday, 9:00-10:20

6.1.36

Shop Scheduling

Chair: *Pierre Lopez*

1 - Job-shop with several transport robots with non unary capacities

Mohand Larabi, Philippe Lacomme, Tchernev Nikolai

2 - Generalized resource constraint propagation for job shop scheduling with time lags

Pierre Lopez, Marie-José Huguet, Christian Artigues

■ **WA-09**

Wednesday, 9:00-10:20

6.2.53

Recent Developments and Applications in Mathematical Programming

Chair: *Gerhard-Wilhelm Weber*

Chair: *Leena Suhl*

1 - On the conjecture of aouchiche and hansen about the Randic index

Ljiljana Pavlovic, Marina Stojanovic

2 - Integrating production, staff size and product price in aggregate planning

Amaia Lusa, Carme Martinez, Marta Mas

3 - Optimizing a job-shop plant using queuing networks techniques

Artur Barreiros, Dulce Silva

4 - Computational experiments with multi-row cuts

Franz Wesselmann, Leena Suhl, Uwe Suhl

■ **WA-10**

Wednesday, 9:00-10:20

6.2.56

OR in Supply Chain Management I

Chair: *Eren Ozceylan*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Edite M.G.P. Fernandes*

1 - Characterizing and modeling supply chain system dissipations

Iskander Zouaghi, Tarik Saikouk, Alain Spalanzani

2 - The robust model of multiple sourcing: alchemy of risk reduction in supplier selection

Adel Azar, Masood Rabieh, Mohammad Javad Feyzollahi

3 - DEA analysis with data which are not crisp

Soheila Ebrahimkhany Ghazy, Mohsen Rostamy-malkhalifeh

■ WA-11

Wednesday, 9:00-10:20

8.2.38

Various New OR Tools and Technologies II: Quality Management Emphasized

Chair: *Gulser Koksal*

Chair: *Tatiana Tchemisova*

Chair: *Gerhard-Wilhelm Weber*

1 - A feature extraction method for fault detection of cyclic signals

Jonghyuck Park, Jun-Geol Baek, Sung-Shick Kim

2 - Beta-geometric model for estimating the product quality after multiple inspections

Young Chun

3 - Competition in remanufacturing

Serra Caner, Ruud Teunter, Xiang Zhu

4 - Controlling product returns from sales demonstrations

Luc Muyldermans, Luk Van Wassenhove, Daniel Guide

■ **WA-12**

Wednesday, 9:00-10:20

8.2.39

ANP 06

Chair: *Ziya Ulukan*

1 - An integrated AHP - ANP quality function deployment framework for the competitive position improvement

George Paltayian, Andreas Georgiou, Katerina Gotzamani, Andreas Andronikidis

2 - Selection of a suitable weee management system using fuzzy ANP

Ziya Ulukan, Sigrid de Mendonca Andersen

3 - Determining effective criteria on investment priorities of wood and paper industries, case of the study: Iran qom province

Majid Azizi, Mehdi Faezipour, Reza Roknedin Eftekhari, Rafat Dehghan Krooki

■ WA-13

Wednesday, 9:00-10:20

2.2.21

Applications of Location

Chair: *Mercedes Landete*

1 - Optimal location of safety cameras at urban intersections for road accidents control: a pilot study in the city of rome

Antonino Sgalambro, Paolo Dell'Olmo, Nicoletta Ricciardi, Riccardo Colicchia, Katia Chiusolo

2 - A mathematical model for urban concentrations with respect to the advance of Japanese railway networks

Yudai Honma

3 - The retrofit of a closed-loop distribution network: the case of lead batteries

Maria Isabel Gomes, Ana Fernandes, Ana Paula Barbósa-Póvoa

4 - A multi-level approach to siting eol treatment resources

Branislava Ratkovic, Milorad Vidovic

■ WA-15

Wednesday, 9:00-10:20

2.2.12

Vehicle Routing Applications II

Chair: *Min Wen*

1 - Utilization and positioning of transshipment points in pickup and delivery

Michael Schneider, Oliver Wendt

2 - Vehicle routing problem with availability constraints

Farhana Johar

3 - Combined vehicle routing and foldable container scheduling

Jan Zazgornik, Patrick Hirsch, Manfred Gronalt

4 - The dynamic multi-period vehicle routing problem

Min Wen, Jean-François Cordeau, Gilbert Laporte, Jesper Larsen

■ **WA-16**

Wednesday, 9:00-10:20

2.2.14

Case studies in planning and operations

Chair: *Konstantinos Gkoumas*

1 - Public transport service reliability in high- and low frequency systems

Konstantinos Gkoumas, Michael Schachtebeck, Anita Schoebel

2 - Equity and externalities issues in the bus network design

Ernesto Cipriani, Marco Petrelli, Gaetano Fusco

3 - Analysis of bus rapid transit systems

Marco Petrelli, Ernesto Cipriani, Stefano Gori

4 - Transit frequency optimization through neural networks

Daniele Tididi, Guido Gentile

■ **WA-18**

Wednesday, 9:00-10:20

1.3.15

Graph Theory and Combinatorial Optimization

Chair: *Erik Kropat*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Zeev (Vladimir) Volkovich*

1 - On the cubical dimension of four new classes of trees

Kamal Kabyl, Abdelhafid Berrachedi

2 - Dynamically maintaining chordal and weakly chordal graphs

Mohamed Amine Boutiche

3 - On defining a combinatorial space

Sergii Sirenko, Leonid Hulianytskyi

4 - Integer linear stochastic programming with multiple objective

Amrouche Salima

■ **WA-20**

Wednesday, 9:00-10:20

1.3.33A

Data Mining and Credit Risk

Chair: *Christophe Mues*

1 - Tuning metaheuristics: a data mining based approach for particle swarm optimization

Stefan Lessmann, Idel Montalvo Arango, Marco Caserta

2 - Mixture cure models in consumer credit risk

Edward Tong, Christophe Mues, Lyn Thomas

3 - When to rebuild and when to recalibrate credit scorecards

Lyn Thomas, Gimun Jung

4 - Support of managerial decision making processes by transductive learning

Hubertus Brandner, Stefan Lessmann

■ **WA-21**

Wednesday, 9:00-10:20

6.2.47

Optimization Algorithms I

Chair: *Simone Garatti*

1 - Scheduling optimization in virtual enterprises based on the hybridization of a csp with a genetic algorithm

Rabah Kassa, Djamila Boukreda, Zaidi Sahnoun

2 - Paradiseo: a framework for metaheuristics

El-ghazali Talbi

■ **WA-23**

Wednesday, 9:00-10:20

6.2.49

Model Selection in Regression Analysis

Chair: *Michael Khachay*

Chair: *Vadim Strijov*

1 - Model generation and model selection in credit scoring

Vadim Strijov

2 - Algorithms of feature selection for volatility estimation of European options

Ekaterina Krymova

3 - A topological approach to formulating conditions of the uniform convergence of frequencies to probabilities

Michael Khachay

4 - Benchmarking framework for financial text mining

Caslav Bozic

■ **WA-24**

Wednesday, 9:00-10:20

6.2.50

Workforce Scheduling 2

Chair: *Shuangqing Liao*

1 - Call center staffing with uncertain arrival rates

Shuangqing Liao, Christian Van Delft, Ger Koole, Oualid Jouini

2 - A heuristic branch-and-bound approach for aircraft line maintenance staffing and scheduling

Jeroen Beliën, Erik Demeulemeester, Brecht Cardoen

3 - Large-scale staff scheduling in airport ground handling

Andreas Klinkert

4 - Appointment scheduling with discrete random durations and applications

Mehmet Begen, Maurice Queyranne

■ WA-25

Wednesday, 9:00-10:20

6.2.48

ROADEF/EURO challenge junior session 2

Chair: *Eric Bourreau*

1 - Roadef/euro challenge 2010: a large-scale energy management problem with varied constraints

Guillaume Dereu, Christian Artigues, Eric Bourreau, H. Murat Afsar, Ender Ozcan

2 - A local search algorithm with a repair procedure for the roadef 2010 challenge

Henri Tokola, Lauri Ahlroth, Andre Schumacher

3 - Constraint programming and local search for a large-scale energy management problem with varied constraints

Niels Kjeldsen, Steffen Godskesen, Rune Larsen, Thomas Sejr Jensen

4 - A constraint integer programming approach to solve large-scale energy management problem with varied constraint

Stefan Heinz, Thomas Schlechte

■ WA-26

Wednesday, 9:00-10:20

3.1.11

Special classes of cooperative games and allocation rules

Chair: *Marco Slikker*

1 - A new bankruptcy rule emerged from an old cooperative value

Mikel Álvarez-Mozos, Jose M^a Alonso-Meijide, M^a Gloria Fiestras-Janeiro

2 - Reasonable costs allocation rules for atm games

Andrés Jiménez-Losada, Casi Chacón, Esperanza Lebrón

3 - About a new solution concept of cooperative tu-games

Nadezhda Smirnova, Svetlana Tarashnina

4 - Spare parts inventory pooling games

Marco Slikker, Frank Karsten, Geert-Jan van Houtum

■ **WA-27**

Wednesday, 9:00-10:20

8.2.06

TRAFFIC AND ENVIRONMENT

Chair: *Ana Luísa Ramos*

1 - A dss solution for air pollution emergencies managing with traffic flows

Valerio de Martinis, Luigi Biggiero, Roberta Di Pace

2 - Shortest path performance within real road network in malaysia perspective

Rohaizan Ramlan, Faiz Shamsuddin

3 - Optimal hierarchical system of a grid road network

Masashi Miyagawa

4 - Model based systems engineering for traffic & environment

Ana Luísa Ramos, José Vasconcelos Ferreira, Jaume Barcelo

■ **WA-28**

Wednesday, 9:00-10:20

8.2.10

Scheduling with Transportation

Chair: *Gul Didem Batur*

1 - Transporting jobs through a processing centre with two parallel machines

Alan Soper, Hans Kellerer, Vitaly Strusevich

2 - A dynamic approach to hybrid flow shop scheduling with transportation requests

Verena Gondek

3 - Multiple part-type, 3 parallel machine scheduling in robotic cells

Gul Didem Batur, Serpil Erol

■ WA-29

Wednesday, 9:00-10:20

8.2.11

Simulation and Optimization Modeling in Finance

Chair: *Ronald Hochreiter*

1 - No-arbitrage conditions, scenario trees, and multi-asset financial optimization

Michael Hanke, Alois Geyer, Alex Weissensteiner

2 - Multi-stage stochastic interest rate management

Ronald Hochreiter

3 - Empirical analysis of two bi-directional online trading algorithms

Esther Mohr, Günter Schmidt, Mike Kersch

4 - Accounting for defined benefit plans (ias 19) — information bias in case of a degenerating workforce

Prof. Dr. Matthias Amen

■ **WA-30**

Wednesday, 9:00-10:20

8.2.13

MCDM 3

Chair: *Tihomir Hunjak*

1 - Computation of non-cooperative equilibrium in multicriteria games

Naouel Yousfi, Mohammed Said Radjef

2 - Multi-criteria semantic association ranking based on instance knowledge-base analysis for criminal organisation identification.

Mariusz Chmielewski, Rafal Kasprzyk

3 - A multi-criteria ranking procedure for ERP software selection

Tugba Efendigil

4 - Comparison of two models for tender evaluation in public procurement

Tihomir Hunjak, Vjekan Strahonja, Dragutin Kermek

■ **WA-31**

Wednesday, 9:00-10:20

8.2.15

Industrial applications of scheduling and routing I

Chair: *Geir Hasle*

1 - Aspects of routing problems in media product distribution

Geir Hasle, Oddvar Kloster, Morten Smedsrud

2 - Optimization in waste management

Jens Baudach

3 - Solving a solid waste collection real problem

Nuno Lebreiro, José Oliveira, Manuel Figueiredo

4 - Handling due-date rendezvous in vehicle routing problems

Stanislas Francfort, Matthieu Chardy

■ **WA-32**

Wednesday, 9:00-10:20

8.2.17

Meeting EURO-WG OR in Agriculture and Forest Management

Chair: *Lluís Miquel Pla*

1 - Meeting euro-wg OR in agriculture and forest management

Lluís Miquel Pla

■ **WA-33**

Wednesday, 9:00-10:20

8.2.19

Optimal policy in the energy markets

Chair: *Elisabetta Allevi*

1 - A quasi-variational model of imperfect coordination: an illustration from electricity restructuring

Giorgia Oggioni, Yves Smeers, Elisabetta Allevi, Siegfried Schaible

2 - Modelling policies for the EU ets allowances

Paolo Falbo, Cristian Pelizzari

3 - Data envelopment analysis with undesirable and uncertain outputs

Rossana Riccardi, Roberta Toninelli

4 - The "invisible hand" for risk averse investment in electricity generation

Daniel Ralph, Yves Smeers

■ **WA-34**

Wednesday, 9:00-10:20

8.2.23

Computational Methods

Chair: *Laura Martein*

1 - Semismooth newton method for quadratic programs with bound constraints

Anna Daryina, Alexey Izmailov

2 - Solving large-scale nonnegative least squares using an adaptive non-monotonic method

Suvrit Sra, Dongmin Kim, Inderjit Dhillon

3 - Block hessian matrices with 0-1 quadratic convex reformulations

Yasmin Rios-solis

4 - Optimal load balancing between erlang-c queueing systems

Jorge Sá Esteves

■ **WA-35**

Wednesday, 9:00-10:20

6.2.46

MINLP: new developments and applications

Chair: *Sonia Cafieri*

1 - Feasibility based bounds tightening as a fixed point in the interval lattice

Leo Liberti, Pietro Belotti, Sonia Cafieri, Jon Lee

2 - A cutting-plane framework for weakly-coupled 0/1 socps

Sarah Drewes, Sebastian Pokutta

3 - Extensions of interval branch-and-bound algorithms for mixed global optimization problems with real and categorical mixed variables

Frederic Messine, Bernard Jeannot

4 - Synthesis of chromatographic protein purification processes using optimization techniques

Eleftheria Polykarpou, Paul Dalby, Lazaros Papageorgiou

■ **WA-36**

Wednesday, 9:00-10:20

3.1.05

OR in the Public Sector

Chair: *Zilla Sinuany-Stern*

1 - Efficiency evaluation of greek engineering departments

Yorgos Goletsis, Vassiliki Brahou

2 - Mixed integer least squares optimization for flight and maintenance planning of mission aircraft

George Kozanidis, Eftychia Kostarelou, Andreas Gavranis

3 - Assessing the influence of operating theatres on the icu bed occupancy

Fermin Mallor, Cristina Azcarate

4 - Coping with the efficiency-equity dilemma in organ sharing

Amir Alalouf, Israel David, Joseph Pliskin

■ WA-37

Wednesday, 9:00-10:20

3.1.09

MCDA applications in agricultural and environmental management

Chair: *Antonio Boggia*

1 - Development of a benefit transfer model using dominance based rough set approach

Lucia Rocchi, Antonio Boggia, Salvatore Greco

2 - Multiobjective optimization for farms using the dominance-based rough set approach

Luisa Paolotti, Antonio Boggia, Salvatore Greco

3 - Assessing biodiversity and sustainability in natura 2000 sites. a multicriteria approach

Carla Cortina, Antonio Boggia

4 - Implementation of dominance based rough set approach module in a geographic information system

Antonio Boggia, Salvatore Greco, Gianluca Massei

■ **WA-38**

Wednesday, 9:00-10:20

6.2.44

Issues in Inventory Management Applications I

Chair: *Thomas Wensing*

1 - Managing subassemblies and components for safety stock of multi products

Emre Cakmak, Hande Gulkac, Mehmet Tanyas

2 - Analysis of an inventory system when orders may crossover

Thomas Wensing, Heinrich Kuhn

■ WA-39

Wednesday, 9:00-10:20

6.2.45

Real-time scheduling of logistic warehouse operations

Chair: *Vicente Valls*

1 - Real-time scheduling of picking and storing operations in a warehouse

M. Angeles Pérez, Francisco Ballestin, M.Pilar Lino, Sacramento Quintanilla, Vicente Valls

2 - Efficient utilisation of resources in the management of warehouse operations: storage location dispersion and forklift workload balance

Sacramento Quintanilla, Francisco Ballestin, M.Pilar Lino, M. Angeles Pérez, Vicente Valls

3 - An optimisation-based decision tool for the management of warehouse operations

Jose Ignacio Llop, Francisco Ballestin, M.Pilar Lino, M. Angeles Pérez, Sacramento Quintanilla, Vicente Valls

4 - Modeling with simulation for the synchronization of manufacturing and warehousing activities in a paint production company

Noyan Sebla GÜnay, Emre Cakmak, Mehmet Tanyas

■ WA-40

Wednesday, 9:00-10:20

6.2.52

Berth Allocation in Maritime Container Terminals

Chair: *Luigi Moccia*

Chair: *Giovanni Giallombardo*

1 - Packing based formulations and local branching approaches to the solution of the berth allocation problem

Pasquale Legato, Daniel Gulli'

2 - The robust paradigm for the berth allocation problem: a review and new perspectives

Giovanni Giallombardo, Giovanna Miglionico, Luigi Moccia

3 - Optimizing seaside operations at dedicated marine container terminals: the limited berth capacity case

Georgios Saharidis, Mihalios Golias, Maria Boile, Sotirios Theofanis

■ **WA-41**

Wednesday, 9:00-10:20

3.1.06

Long Term Decisions in Forestry

Chair: *Christian Clasen*

1 - Learning to formulate forest stand and enterprise planning problems

Ruth Dirsch

2 - Real options, optimal forest rotation and long-term land conversion decisions: an afforestation case study for the Canadian agriculture-forestry interface

Denys Yemshanov, Geoff McCarney, Marty Luckert, Jim Unterschultz, Dan McKenny

3 - On the use of the 'forestry interest rate' as approximation approach in an uncertain world

Thomas Burkhardt

4 - Long-term investment in forests under changing conditions — a risk/reward analysis

Christian Clasen

■ WA-42

Wednesday, 9:00-10:20

3.1.07

Decision Making 3

Chair: *Cheng-Ru Wu*

1 - Modelling airport performance trade-off analysis

Michael Madas, Konstantinos Zografos, Yiannis Salouras

2 - Considering customers' preferences to analyze the development of the ledtv market in taiwan

Fang-Mei Tseng, Yadi Lin

3 - Pareto-efficient sub-branches of the decision tree

Toms Reizins, Andrejs Jaunzems

4 - Evaluate outsourcing commerce semiconductor industry based on grey situation decision-making

Juo-Yi Sun, Chia-Chun Liao, Cheng-Ru Wu, Che-Wei Chang

■ **WA-43**

Wednesday, 9:00-10:20

8.2.02

Operational Research in Sustainable Urban Development

Chair: *Marija Burinskien?*

1 - Application of operation research for sustainable urban development

Marija Burinskien?, Vitalija Rudzkien?, J?rat? Venckauskait?

2 - Multi-actor multi-criteria analysis: a case study on night time delivery for urban distribution

Ellen Van Hoeck, Sara Verlinde, Annelies Heemeryck, Cathy Macharis, Frank Witlox

3 - Sustainability in supplier selection: application of the macbeth methodology

Luis Ferreira, Vitor André

■ **WA-44**

Wednesday, 9:00-10:20

8.2.03

Vector and Set-Valued Optimization II

Chair: *Miguel Sama*

1 - An approximation algorithm for convex multi-objective programming problems

Matthias Ehrgott

2 - Generalizing trade-off directions in multiobjective optimization

Yury Nikulin, Marko M. Mäkelä, József Mezei

3 - On epiconvergence for vector-valued functions

Ruben Luis Lopez Montoya, César Gutiérrez

4 - Graphical differentiation of the gradient

Miguel Sama, Bienvenido Jiménez, Vicente Novo

■ **WA-46**

Wednesday, 9:00-10:20

8.2.14

Stochastic Programming Tools

Chair: *Tamas Szantai*

1 - Ranking and optimization pms algorithm with traffic forecasting

Andras Bako, Foldesi Peter, Szuts Istvan

2 - Modeling redial cellular mobile networks in random environment

Mj Lopez-Herrero, Jesus Artalejo

3 - Probabilistic constrained stochastic programming with copula generated multivariate probability distributions

Tamas Szantai, Edith Kovacs

■ **WA-47**

Wednesday, 9:00-10:20

8.2.16

OR in Educational Problems and Systems

Chair: *Alexander Makarenko*

Chair: *Alexis Pasichny*

1 - Usage of OR methods for research of contemporary geopolitics

Alexis Pasichny

2 - Scenarios development methodology based on SWOT and morphological analysis

Kateryna Pereverza

3 - Social indicators for supply chain analysis

Ana Carvalho, Ana Paula Barbósa-Póvoa

■ WA-48

Wednesday, 9:00-10:20

8.2.04

Variational inequalities and applications to economic market models

Chair: *Patrizia Daniele*

1 - An inverse variational inequality approach to the evolutionary spatial price equilibrium problem

Laura Scrimali

2 - Mitigating global supply chain risks through corporate social responsibility

Jose Cruz

3 - Dynamic oligopolistic market equilibrium problem with long-term memory: lipschitz continuity and infinite dimensional duality theory

Annamaria Barbagallo, Antonino Maugeri, Rosalba Di Vincenzo

4 - Combined methods for dynamic spatial auction market models

Adriana Gnudi, Igor Konnov, Elisabetta Allevi

■ **WB-02**

Wednesday, 10:40 - 12:00

3.2.14

Keynote Talk 10

Chair: *José Paixão*

1 - Exact and heuristic algorithms for the vertex coloring problem

Paolo Toth

■ WB-04

Wednesday, 10:40 - 12:00

3.2.13

Assignment and clustering problems

Chair: *Daniel Tuyttens*

Chair: *Skander Htiouech*

1 - Approximation algorithms for the multi-resource agent bottleneck generalized assignment problem

Ozlem Karabulut, Meral Azizolu

2 - A preference based multiobjective algorithm for the clustering problem

Kerem Demirta?, Nur Evin Ozdemirel, Esra Karasakal

3 - Using surrogate information to solve the multidimensional multi-choice problem

Skander Htiouech

4 - A GRASP algorithm to solve the label printing problem

Daniel Tuyttens, Arnaud Vandaele

■ WB-05

Wednesday, 10:40 - 12:00

3.2.16

Graph problems

Chair: *Maria Soto*

1 - A metaheuristic approach to the graceful labeling problem of graphs

Houra Mahmoudzadeh, Kouros Eshghi

2 - New methods to solve the graph partitioning problem

Mark Macedo, João Pedro Pedroso, José Soeiro Ferreira

3 - A metaheuristic for a graph clustering formulation

Mariá C. V. Nascimento, Franklina Toledo

4 - Hybrid electromagnetic-like metaheuristic for the generalized minimum spanning tree problem

Jouhaina Chaouachi Siala, Ichraf Zaidi

■ **WB-06**

Wednesday, 10:40 - 12:00

8.2.30

DEA Application VI — Utilities

Chair: *Rui Marques*

1 - Economies of scope in the Portuguese water utilities

Pedro Carvalho, Rui Marques

2 - Comparing public and private urban waste services in portugal

Pedro Simões, Rui Marques

3 - The application and utilization of data envelopment analysis for evaluating the cost efficiency of brazilian electricity distribution utilities

Marcus Vinicius Pereira de Souza, Madiagne Diallo, Reinaldo Souza, Tara Keshar Nanda Baidya

4 - Evaluating police stations' performance via DEA

Zilla Sinuany-Stern, Doron Alper, Vered Berdugo-Kushnir

■ WB-07

Wednesday, 10:40 - 12:00

8.2.47

Scheduling Approaches for Complex Manufacturing Systems

Chair: *Lars Moench*

1 - Lot-streaming and just-in-time scheduling on identical parallel machines with a common due date

Oncu Hazir, Kedad-sdihoum Safia

2 - Batch scheduling problems with parallel machines and identical jobs

Liji Shen, Lars Moench, Udo Buscher

3 - A column generation approach to minimize total weighted tardiness for jobs on parallel machines

Lars Moench, Timm Ziarnetzky

4 - A multistage mathematical programming based scheduling approach for lithography areas in complex semiconductor manufacturing systems

Andreas Klemmt, Gerald Weigert

5 - Scheduling jobs with ready times and incompatible families on unrelated parallel batch machines

Lars Moench, Christian Almeder

■ WB-08

Wednesday, 10:40 - 12:00

6.1.36

Approximation and Competition

Chair: *Sergei Chubanov*

- 1 - **Decomposed software pipelining for vliw with precedence delays and resource constraints.**

Abir Benabid, Claire Hanen

- 2 - **Approximation results for the two machine cross-docking problem**

Christophe Rapine, Damien Prot, Olivier Goldschmidt

- 3 - **Cooperation and competition of subcontracted operations**

George Vairaktarakis

■ WB-09

Wednesday, 10:40 - 12:00

6.2.53

New Frontiers in the Application of Mathematical Programming

Chair: *Tatiana Tchemisova*

Chair: *Gerhard-Wilhelm Weber*

1 - Reverse automatic differentiation in shape optimisation: non-axisymmetric vesicle shape parameterisation case study

Redouane Boudjemaa

2 - Column generation based primal heuristics

François Vanderbeck, Cédric Joncour, Sophie Michel, Ruslan Sadykov

3 - New mathematical models for balance stability in u-type assembly lines

Banu Guner, Servet Hasgul

4 - Complexity of a particular class of 0-1 linear multiplicative fractional programming problems

Simranjit Kaur

■ WB-10

Wednesday, 10:40 - 12:00

6.2.56

Emerging Nonlinear Optimization Applications of OR

Chair: *A. Egemen Yilmaz*

Chair: *Gerhard-Wilhelm Weber*

1 - Hierarchical multi-player game-solution identification for cooperative advertising supply chain using multi-objective particle swarm optimization

Chie-bein Chen, Ming-Hui Chen, Shiuan-Yiang Huang, Wei Ting Cho, Po-Liang Chao, Chung-Chang Lien

2 - Robust R&D project management

Ruken Duzgun, Aurelie Thiele

3 - Novel approaches in particle swarm optimization and potential applications in OR

Okkes Tolga Altinoz, A. Egemen Yilmaz, Gerhard-Wilhelm Weber

4 - A stochastically perturbed particle swarm optimization for identical parallel machine scheduling problems

Mehmet Sevkli

■ WB-11

Wednesday, 10:40 - 12:00

8.2.38

Recent Advances in Quality Management and OR in Reliability Engineering

Chair: *Gulser Koksal*

Chair: *Gerhard-Wilhelm Weber*

- 1 - Optimum process mean, specification limits, and manufacturing quantity based on quadratic loss function and rectifying inspection plan with perfect and imperfect reworks**

Muhammad Al-Salamah, Ashraf El-ga'aly

- 2 - Redundancy allocation for serial systems**

Kurtulus Baris Oner, Geert-Jan van Houtum, Alan Scheller-Wolf

■ WB-12

Wednesday, 10:40 - 12:00

8.2.39

AHP 06

Chair: Ahmet Kandakoglu

- 1 - Developing an organizational performance model for community empowerment in taiwan**

Pin-Ju Juan, Shin-Yi Lin, Benjamin J.C. Yuan

- 2 - Development and application of an analytic hierarchy process model for assessing airport advanced surface movement guidance and control systems**

Konstantinos Zografos, Konstantinos Androutsopoulos

■ **WB-13**

Wednesday, 10:40 - 12:00

2.2.21

Heuristics in location

Chair: *Said Salhi*

1 - Evaluation of an ant based hybrid metaheuristic to solve the capacitated facility location problem

Harry Venables, Alfredo Moscardini

2 - Goal programming in location problems

Juraj Pekár, Ivan Brezina, Zuzana Cicková

3 - Formulation space search for location-allocation problem

Nenad Mladenovic, Jack Brimberg

■ **WB-14**

Wednesday, 10:40 - 12:00

2.2.15

Pension funds

Chair: *Elena Vigna*

1 - Optimal asset allocation and sharing rule for pension funds in dc and db frameworks

Francesco Menoncin

2 - Demographic risk sharing in defined contribution pension funds

Martino Grasselli, Daniel Gabay

3 - Constrained portfolio choices in the decumulation phase of a pension plan

Fausto Gozzi, Salvatore Federico, Marina Di Giacinto, Elena Vigna

4 - Stochastic pension funding when benefits follow a jump diffusion process

Juan Pablo Rincon-Zapatero, Ricardo Josa-Fombellida

■ WB-15

Wednesday, 10:40 - 12:00

2.2.12

Vehicle Routing Applications III

Chair: *Joaquín Pacheco*

1 - Solving a stochastic bi-objective covering tour problem

Fabien Tricoire, Walter Gutjahr

2 - Vehicle routing: a case study for laundry services

Azmin Azliza Aziz

3 - Optimizing vehicle routes in a bakery company

Joaquín Pacheco, Ada Alvarez, Irma García, Francisco R. Angel-Bello

■ WB-16

Wednesday, 10:40 - 12:00

2.2.14

OR models in Public Transport

Chair: *Leo Kroon*

1 - Route of new high-speed line which minimizes total travel time of railway users

Takamori Ukai

2 - Conflict avoidance for air traffic flow management problem, pure and mip models

Pablo Olaso, Celeste Pizarro Romero, Laureano Fernando Escudero

3 - An ant colony optimisation algorithm for simulating hyper-path choices on real-scale networks

Luca D'Acierno, Mariano Gallo, Bruno Montella

4 - A column generation approach to the vehicle positioning problem

Carlos Cardonha, Ralf Borndörfer

■ WB-17

Wednesday, 10:40 - 12:00

1.3.14

Financial Mathematics and Stochastic Modelling

Chair: *Efsun Kürüm*

1 - Economical applications of almost stochastic dominance

Elena Almaraz Luengo

2 - Optimal control of a finite-capacity stochastic inventory system with setup cost and lost sales

Xiuli Chao, Yifan Xu

3 - Modelling predecisional bias in a speculative financial market

David McDonald, Ming-Chien Sung, Johnnie Johnson

4 - Testing for breaks in stochastic volatility model

Carlos Rivero

■ WB-18

Wednesday, 10:40 - 12:00

1.3.15

Stochastic Models and Queueing Systems

Chair: *Erik Kropat*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Zeev (Vladimir) Volkovich*

1 - Equilibrium and socially optimal strategies in the $m/g/1$ queue with vacations

Antonio Gomez-Corral

2 - Nonparametric estimation for a numerical evaluation of the proximity of $g/g/1$ and $g/m/1$ systems

Aïcha Bareche, Djamil Aïssani

3 - An $m/g/1$ retrial queue with exhaustive service and multiple vacation policy

Mohamed Boualem, Djamil Aïssani, Djellab Natalia

■ WB-19

Wednesday, 10:40 - 12:00

1.3.20

Nonsmooth Optimization and Its Applications

Chair: *Antonio Fuduli*

Chair: *Annabella Astorino*

1 - Generalized bundle methods for decomposable functions with "easy" components

Enrico Gorgone, Antonio Frangioni

2 - Analysis of optimization algorithms for clustering

Zorana Luzanin

3 - Heuristic algorithm for clustering large data sets based on nonsmooth optimization approach

Adil Bagirov

4 - Nonsmooth convex optimization via piecewise quadratic approximations

Annabella Astorino, Antonio Frangioni, Manlio Gaudioso, Enrico Gorgone

■ **WB-20**

Wednesday, 10:40 - 12:00

1.3.33A

Data Mining and Decision Making II

Chair: *Hsin-Vonn Seow*

Chair: *Lai-Soon Lee*

1 - Rule based predictive models, decision table and tree: an empirical evaluation on comprehensibility

Karel Dejaeger, Wouter Verbeke, Johan Huysmans, Christophe Mues, Jan Vanthienen, Bart Baesens

■ WB-21

Wednesday, 10:40 - 12:00

6.2.47

Optimization Algorithms II

Chair: *Tamas Kis*

1 - Strengthening split cuts by lift-and-project

Tamas Kis, Egon Balas

2 - A hybrid algorithm for global optimization problems

Leticia Velazquez, Miguel Argaez, Miguel Hernandez, Carlos Ramirez, Reinaldo Sanchez

3 - Some experimental results measuring the complexity of the b&b algorithm versus the geometry of the polyhedron

Ivan Derpich

■ **WB-22**

Wednesday, 10:40 - 12:00

3.1.10

Maritime transportation

Chair: *Marielle Christiansen*

1 - Integrated cargo routing and ship scheduling in liner shipping

Karina Kjeldsen, Oguz Solyali

2 - A branch-and-price-and-cut method for a maritime pickup and delivery problem with time windows and split loads

Magnus Stålhane, Henrik Andersson, Marielle Christiansen, Jean-François Cordeau, Guy Desaulniers

3 - A medium-term short sea fuel oil distribution problem

Alexandrino Duarte Delgado, Agostinho Agra, Marielle Christiansen

4 - Recent research and trends in maritime cargo and inventory routing

Marielle Christiansen

■ WB-23

Wednesday, 10:40 - 12:00

6.2.49

Price and Risk Forecasting in the Financial Sector

Chair: *Marcus Hildmann*

Chair: *Vadim Strijov*

1 - Conditional bootstrapping and price forecasting

Marcus Hildmann, Dejan Stokic, Florian Herzog

2 - Neural network based search for mispriced options

Dejan Stokic, Marcus Hildmann

3 - Nonparametric method for economic indices construction. application to analysis of capital and financial markets

Ivan Kondrakov, Alexander Shananin

4 - Estimation of investment project profitability in the modified cantor-lipman model

Mikhail Vashchenko

■ WB-24

Wednesday, 10:40 - 12:00

6.2.50

Automated Nurse Rostering

Chair: *Greet Vanden Berghe*

1 - Design and implementation of operational research techniques for making schedules of nurses

Lakhdar Djefal, Elamir Djefal, Gilles Goncalves

2 - On solving real nurse rostering problems

Margarida Pato, Margarida Moz, Pedro Caldeira

3 - Robust optimization approach to scheduling interns at hospitals

Maryam Ghotbaddini, Mohammad Javad Feyzollahi, Mohammad Modarres

4 - Constraint and precondition definitions for nurse rostering problems

Greet Vanden Berghe, Burak Bilgin

■ WB-25

Wednesday, 10:40 - 12:00

6.2.48

ROADEF/EURO challenge senior session 1

Chair: *H. Murat Afsar*

1 - A guided-construction approach to large scale power plant scheduling

Cor Hurkens

2 - A solution approach to the roaDEF/euro challenge based on benders decomposition

Laurent Flindt Muller, Richard Lusby, Bjørn Petersen

3 - Matheuristic methods for large-scale energy management problems

Mauro Dell'Amico, José Carlos Díaz Díaz

4 - Team s21: using integer linear model for scheduling outages

Vincent Jost, David Savourey, Nora Touati Moun gla

■ WB-26

Wednesday, 10:40 - 12:00

3.1.11

New Achievements in Game Theory I (cooperative and noncooperative)

Chair: *Mariana Rodica Branzei*

Chair: *Sirma Zeynep Alparslan Gok*

Chair: *Gerhard-Wilhelm Weber*

1 - A smuggling game with incomplete information

Ryusuke Hohzaki, Ryuichi Masuda

2 - New results on rendezvous search on the interval

John Howard, Marco Timmer

3 - A modified beer game with two decision-makers at each stage

Özlem Çoban, Murat Kaya, Gurdal Ertek

■ **WB-27**

Wednesday, 10:40 - 12:00

8.2.06

URBAN TRANSPORT SYSTEMS

Chair: *Maurizio Bruglieri*

1 - Data provision for attended home delivery in urban areas

Dirk Christian Mattfeld, Jan Fabian Ehmke

2 - Centralized versus decentralized control - a solvable stylized model in transportation logistics

Olivier Gally, Max-Olivier Hongler, Michael Hülsmann, Philip Cordes, Richard Colmorn

3 - Improved probe vehicle measurements with point data

Livia Mannini, Ernesto Cipriani, Stefano Gori

4 - A web-based carpooling service for universities: a case study in milan

Maurizio Bruglieri, Alessandro Luè, Alberto Colorni

■ WB-28

Wednesday, 10:40 - 12:00

8.2.10

Scheduling with Due Dates

Chair: *Igor Karpov*

1 - Heuristics for the single machine weighted squared tardiness scheduling problem

Jorge Valente, Jeffrey Schaller

2 - Evaluation of job shop scheduling rules in due date performance optimization

Fabio Pereira, Edna Barbosa, Michele Gonçalves, Marilda Fátima

3 - A preemption-based heuristic for the single-machine total weighted tardiness problem

Halil ?en, Kerem Bulbul

4 - Polynomially solvable case of the np -hard problem $1|r_j|l_{\max}$

Igor Karpov, Alexander Lazarev

■ WB-29

Wednesday, 10:40 - 12:00

8.2.11

Energy and Environmental Finance

Chair: *Silvana Stefani*

1 - Market power and optimal energy production under the EU ets system

Daniele Felletti, Silvana Stefani, Paolo Falbo

2 - New solution tools to unit commitment in power production planning

Joao Pedro Pedroso, Ana Viana, Abdur Rais

3 - Emission markets: dynamics of market prices and a "fair" price for CO2

Silvana Stefani, Daniele Felletti, Paolo Falbo

4 - Does speculation drive oil prices? a new evidence

Cristina Bencivenga, Umberto Triulzi, Rita D'Ecclesia

■ **WB-30**

Wednesday, 10:40 - 12:00

8.2.13

Risk Models in Finance

Chair: *João Oliveira Soares*

1 - Quantitative vs. qualitative criteria for credit risk assessment*

João Oliveira Soares, Joaquim Pina, Margarida Catalão-Lopes

2 - Consolidation in the European pharmaceutical industry

Alain Chevalier

3 - Incorporating risk and uncertainty into MCDM in practice

Brendan O'Brien, Cathal Brugha

4 - The information content of option-based forecasts of volatility

Silvia Muzzioli

■ WB-31

Wednesday, 10:40 - 12:00

8.2.15

Industrial applications of scheduling and routing II

Chair: *Geir Hasle*

1 - Scheduling and routing of harvesting resources

Mikael Rönnqvist, David Bredström, Petrus Jönsson

2 - Solving the dynamic pickup and delivery problem with time windows using hybrid local search metaheuristics

Jawad Omari

3 - A decision support system for cruise yacht scheduling and routing

Dimitris Paraskevopoulos, Panagiotis Repoussis, Christos Tarantilis, George Ioannou

4 - Integrated crew pairing and assignment by column generation and dynamic constraint aggregation

Issmail Elhallaoui, Francois Soumis, Mohamed Sadoune, Guy Desaulniers

■ WB-32

Wednesday, 10:40 - 12:00

8.2.17

Energy and technological system issues

Chair: *Vincent Mazauric*

1 - Energy transmission in electrical engineering: a multi-scale approach

Vincent Mazauric, Nadia Maïzi

2 - Optimisation of a multi sources district heating network using floyd and moore algorithms

Ghanassia Elie

3 - Optimization of future power systems focusing on reliability of supply

Mathilde Drouineau, Nadia Maïzi, Vincent Mazauric

4 - The diversity of Canadian energy policies: an illustration of emerging opportunities using the new model times-canada

Jean-Philippe Waaub, Kathleen Vaillancourt, Olivier Bahn, Richard Loulou

■ **WB-33**

Wednesday, 10:40 - 12:00

8.2.19

Carbon markets

Chair: *Pauline Barrieu*

Chair: *Max Fehr*

1 - Existence of a supply function equilibrium for electricity markets

Edward Anderson

2 - Option pricing in the European unions emission trading scheme

Max Fehr

3 - On fair pricing of emission-related derivatives

Juri Hinz

4 - Pricing CO2 permits using approximation approaches

Rudiger Kiesel

■ WB-34

Wednesday, 10:40 - 12:00

8.2.23

Fast algorithms for large matrix optimization problems

Chair: *Michel Baes*

1 - Smoothing techniques for solving structured semidefinite programs

Michael Bürgisser, Michel Baes

2 - Randomised first-order algorithms for large semidefinite optimization

Michel Baes

3 - An alternating direction algorithm for finding jointly sparse extremal eigenvectors

Peter Richtarik

4 - Kernel-based interior-point methods for monotone lcp over symmetric cones

Goran Lesaja, Kees Roos

■ WB-35

Wednesday, 10:40 - 12:00

6.2.46

MINLP Reformulations and Applications

Chair: *Leo Liberti*

1 - Expectation and chance-constrained models and algorithms for insuring critical paths

Cole Smith, Siqian Shen, Shabbir Ahmed

2 - Robust formulations for mixed integer non-linear programs: uncertainty in routing problems

Hassan Hijazi, Pierre Bonami, Adam Ouorou

3 - The signomial global optimization algorithm — some recent advances

Andreas Lundell, Tapio Westerlund

4 - Reduced reformulation-linearization technique for polynomial programs

Sonia Cafieri, Pierre Hansen, Lucas Létocart, Leo Liberti, Frederic Messine

■ **WB-36**

Wednesday, 10:40 - 12:00

3.1.05

News from Commercial MIP Solvers

Chair: *Daniel Junglas*

1 - Recent improvements to ilog ibm cplex

Daniel Junglas

2 - Recent improvements to fico xpress

Oliver Bastert, Richard Laundry

3 - Primal heuristics and related features of the SAS/OR MILP solver

Philipp Christophel

4 - Preprocessing in linear-fractional programming

Anett Racz

■ WB-37

Wednesday, 10:40 - 12:00

3.1.09

MCDA and Public Administration

Chair: *Norese Maria Franca*

1 - Using a MCDA methodology for evaluating social acceptance of hydrogen technology in france: from collective perceptions to criteria

Sébastien Damart, Amidou Kpoumie, Benjamin Rousval, Alexis Tsoukiàs

2 - An integrated use of cognitive mapping and multi criteria models to support communication and innovation

Maria Franca Norese, Simone Griffa, Chiara Novello

3 - The strategic choice approach (sca) for structuring decisional problems in the context of public projects. the turin east ring road case study.

Diana Rolando

4 - Real option analysis as a decision aiding tool

Giulia Lucertini, Chiara D'Alpaos, Alexis Tsoukiàs

■ WB-38

Wednesday, 10:40 - 12:00

6.2.44

Lot-sizing models

Chair: *Wilco van den Heuvel*

1 - Reformulations of the economic lot-sizing problem with remanufacturing

Mathijn Retel Helmrich, Wilco van den Heuvel, Raf Jans, Albert Wagelmans

2 - Gray markets and all units discounts

Mengze Shi

3 - Effective replenishment policies for the multi-item dynamic lot-sizing problem with inventory limited

Jose M Gutierrez, Marcos Colebrook, Beatriz Abdul-Jalbar, Joaquín Sicilia

4 - Some lot-sizing models with perishable items

Wilco van den Heuvel, Mehmet Onal, Edwin Romeijn

■ WB-39

Wednesday, 10:40 - 12:00

6.2.45

Scheduling and Pricing

Chair: *Wieslaw Kubiak*

1 - Dynamic resource scheduling

Joanna Jozefowska, Lukasz Jozefowski, Wieslaw Kubiak

2 - An overview on shop scheduling with minimum time lags

Djamal Rebaine

3 - Makespan minimization of multi-slot just-in-time scheduling on single and parallel machines

Dariusz Dereniowski, Wieslaw Kubiak

4 - Bullwhip effect emergence into an after-sales spare part service supply chain in telecom firms - a complex system approach

Mauricio Flores, Oswaldo Morales Matamoros, Ricardo Tejeida Padilla, Isaias Badillo Piña

■ WB-40

Wednesday, 10:40 - 12:00

6.2.52

Optimal Control and Design in Applications

Chair: *Volker Schulz*

Chair: *Moritz Diehl*

1 - Aerodynamic shape optimization under uncertainty

Claudia Schillings, Volker Schulz

2 - Large scale aerodynamic shape optimization

Stephan Schmidt, Volker Schulz

3 - Double smoothing algorithm for a class of optimal control problems

Olivier Devolder, François Glineur, Yurii Nesterov

■ **WB-41**

Wednesday, 10:40 - 12:00

3.1.06

Long Term Financial Decisions

Chair: *Ursula Walther*

1 - Is timing money? the return shaping effect of technical trading systems

Peter Scholz

2 - Development of service quality (sq) reference model in private banking (pb)

Erkan Sengün

3 - Diversification effects of asset price process parameters — an empirical investigation

Ursula Walther, Andryi Fetsun

■ **WB-43**

Wednesday, 10:40 - 12:00

8.2.02

Sustainable Construction Processes

Chair: *Jana ?elih*

1 - Sustainability assessment of construction processes

Jana ?elih, Aleksander Srdic

2 - New classification of construction companies: overhead costs aspect

Rasa Apanaviciene, Ala Daugeliene

3 - ERP system implementation in latvian construction company

Andrejs Tambovcevs

4 - Environmental management systems experience among latvian construction companies

Tatjana Tambovceva, Ineta Geipele

■ WB-44

Wednesday, 10:40 - 12:00

8.2.03

Vector and Set-Valued Optimization III

Chair: *Enrico Miglierina*

1 - Characterizations of calmness and subregularity of constraint set mappings

Helmut Gfrerer

2 - Generalized convexity for multiobjective problems with conic constraints

Beatriz Hernández, Marko A. Rojas-Medar, Rafaela Osuna-Gómez, Antonio Rufián-Lizana

3 - Mountain pass-type theorem for vector-valued functions

Enrico Miglierina, Ewa Bednarczuk, Elena Molho

■ **WB-45**

Wednesday, 10:40 - 12:00

8.2.12

New Trends of Facility Logistics

Chair: *Yugang Yu*

1 - A location problem in construction management

Huseyin Guden, Haldun Sural

2 - Optimal dislocation of transport junctions

Vaclav Cempirek

3 - Material handling systems - the future is now

Dominik Berbig, Christian Huber, Frank Schönung, Christoph Nobbe, Kai Furmans

■ **WB-46**

Wednesday, 10:40 - 12:00

8.2.14

Stochastic Optimization Models

Chair: *Marta Kostrzevska*

1 - Strategic capacity planning under dynamic probabilistic demand

Ashis Chatterjee, Dipankar Bose

2 - The problem of minimum cost flow on dynamic generative network flows

Seyed Ahmad Hosseini

3 - Stochastic single product network design model with lead time and safety stock considerations

Mehdi SharifYazdi, Leyla Ozsen, Behzad Bagheri

4 - Optimization methods for stochastic cost flow problem

Marta Kostrzevska, Leslaw Socha

■ WB-47

Wednesday, 10:40 - 12:00

8.2.16

Activities for Popularization of Science

Chair: *Kateryna Pereverza*

1 - Promoting and disseminating science among youth: peculiarities and perspectives

Ielyzaveta Korotchenko

2 - Organizing of scientific and educational projects as a way to integrating students into scientific community

Alexej Orlov, Kateryna Pereverza

3 - Activity of student's organizations for popularization of science: russian experience

Oleg Tumanov

4 - Leadership style and organizations' strategic orientation

Gabrijela Leskovar-?pacapan

■ **WB-48**

Wednesday, 10:40 - 12:00

8.2.04

Iterative Methods for Economic Models: Related Topics

Chair: Adriana Gnudi

■ WC-02

Wednesday, 12:20 - 13:40

3.2.14

Keynote Talk 11

Chair: *Jacek Blazewicz*

1 - The discretizable molecular distance geometry problem

Nelson Maculan Filho

■ WC-04

Wednesday, 12:20 - 13:40

3.2.13

Facilities planning, design and management

Chair: *Lionel Amodeo*

Chair: *Eric Taillard*

1 - An estimation of distribution algorithm for machine part cell formation problem

Ibrahim Saber, Bassem Jarboui, Rebai Abdelwaheb

2 - A particle swarm optimization algorithm for a pick and place robotic system

Slim Daoud, Farouk Yalaoui, Lionel Amodeo, Hicham Chehade, Thierry Girard

3 - Electromagnetic meta-heuristic method for solving floorplanning problem

Seyyed Hassan Taheri, Eric Taillard

4 - Minimizing working time in the straight assembly line with deteriorating tasks

E. Maneshi, M.b. Aryanezhad, U. Bahalke, M. Karimi-Nasab, A.m. Yolmeh

■ WC-05

Wednesday, 12:20 - 13:40

3.2.16

Matheuristics

Chair: *Matteo Fischetti*

Chair: *Filipe Alvelos*

1 - A hybrid multiple particle collision algorithm applied to a source estimation inverse problem

Eduardo Luz, José Carlos Becceneri, Haroldo F. Campos Velho

2 - A primal-dual local search heuristic for the set covering problem

Belma Yelbay, S. Ilker Birbil, Kerem Bulbul

3 - A local search heuristic based on column generation

Filipe Alvelos, Amaro de Sousa, Dorabella Santos, Carina Pimentel, Elsa Silva, J. M. Valério de Carvalho

■ WC-06

Wednesday, 12:20 - 13:40

8.2.30

DEA Applications XI

Chair: *Mikulas Luptacik*

1 - Changes in productivity of spanish university libraries

Clara Simon de Blas, Jose Simon Martin, Alicia Arias

2 - Initial allocation of emission certificates using data envelopment analysis

Mikulas Luptacik

3 - Academia and business world on bank performance: are they on the same page? developing a case for China

Necmi Avkiran

4 - Evaluating mutual funds using robust nonparametric techniques

Amparo Soler-Dominguez, Juan Carlos Matallin-Saez, Emili Tortosa-Ausina

■ WC-07

Wednesday, 12:20 - 13:40

8.2.47

Machine Scheduling

Chair: *Sinan Gürel*

1 - Single-machine scheduling with a general learning effect function

Wen-Chiung Lee

2 - Scheduling of jobs in a parallel machine problem with eligibility and release and queue times

Manuel Mateo, Xavier Garriga, Imma Ribas

3 - Finite-capacity-based due date setting: a computational study for flow-shops

Paz Perez Gonzalez, Jose M Framinan, Jose M. Molina-Pariente

4 - Decompositions and conic formulations for railway design problems with convex congestions at yard locations

Sinan Gürel

■ WC-08

Wednesday, 12:20 - 13:40

6.1.36

Various Advances on Management and Scheduling I

Chair: *Erwin Pesch*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Edmund Burke*

1 - Monthly tour scheduling models with mixed skills considering weekend off requirements

Aiying Rong

2 - Reducing schedule instability on the order level for the multi-item capacitated lot-size problem

Andreas Cardeneo, Sebastian Fiedler

3 - Coordination of the branch closing times and scheduling the unloading operations in a parcel transfer center

Kadir Ertogral, Onur Dikmen

■ WC-09

Wednesday, 12:20 - 13:40

6.2.53

Advanced Applications in Mathematical Programming

Chair: *Gerhard-Wilhelm Weber*

Chair: *Domingos Cardoso*

1 - Optimal pricing, marketing and order quantity for one laptop per child

Mostafa Ghasem Esfahani, Seyed Jafar Sadjadi

2 - An upper bound for quadratic multiple knapsack problem

Tugba Saraç

3 - An entropy-based solver for multidimensional nonlinear knapsack problems

Yuji Nakagawa, Ross J. W. James, César Rego, Chanaka Edirisinghe

4 - A mathematical approach to seek the natural and practical piano fingering

Keisuke Hotta

■ WC-11

Wednesday, 12:20 - 13:40

8.2.38

Advances in the Use of Information Technology III

Chair: *Sevgi Ozkan*

Chair: *Gerhard-Wilhelm Weber*

1 - Innovative training methodologies for transport trainers

Ivan Kolarov

2 - Residual intelligibility estimation method on a safety area border

Elena Arkhypova, Vladimir Zhuravlev

3 - Evaluate outsourcing design systems performance based on gra

Cheng-Ru Wu, Chiu-Chin Chen, Che-Wei Chang

■ WC-12

Wednesday, 12:20 - 13:40

8.2.39

AHP 07

Chair: *Gulgun Kayakutlu*

1 - Applying the delphi and AHP for selecting the optimal international exhibition agency

Pi-Fang Hsu, Hsin-Yu Chiang

2 - Influential causes of bullwhip effect in automotive supply chain

Fatih Tas, Gulgun Kayakutlu

3 - Correction approach for solving the pairwise comparison matrix inconsistency

Dmitry Borodin, Viktor Gorelik

4 - Interactive comparison support with comparison pattern search for analytic hierarchy process

Yumi Tadano, Hidenori Kawamura, Keiji Suzuki

■ WC-13

Wednesday, 12:20 - 13:40

2.2.21

Location and Network Design

Chair: *Ivana Ljubic*

1 - Lagrangean decomposition for an adaptive location-distribution problem

Bernard Gendron, Paul-Virak Khuong, Frédéric Semet

2 - The hop-constrained connected facility location problem

Stefan Gollowitzer, Ivana Ljubic

■ WC-14

Wednesday, 12:20 - 13:40

2.2.15

Stochastic Methods in Finance and Economics

Chair: *Ricardo Josa-Fombellida*

Chair: *Juan Pablo Rincon-Zapatero*

1 - Consumption, portfolio and life insurance rules for time-inconsistent decision makers

Jesús Marín-Solano, Jorge Navas, Oriol Roch

2 - Effect of term structure of futures price on spot procurement policies

Ankur Goel, Genaro Gutierrez

3 - Risk-sensitive discounted and average criteria in finite state Markov decision chains

Karel Sladky

4 - Replacement investment under tax uncertainty

Joao Zambujal-Oliveira

■ WC-15

Wednesday, 12:20 - 13:40

2.2.12

Arc Routing Problems

Chair: *Luis Gouveia*

1 - Rural postman and related arc routing problems

Ana Maria Rodrigues, José Soeiro Ferreira

2 - Bounds for the mixed capacitated arc routing problem

Cândida Mourão, Luis Gouveia, Leonor S.Pinto

3 - Models for the sectoring-arc routing problem (sarp)

Ana Catarina Nunes, Cândida Mourão

4 - A lower bound and a hybrid ils-vnd for a location arc routing problem

Labadi Nacima, Jan Melechovsky

■ WC-16

Wednesday, 12:20 - 13:40

2.2.14

Improving Real-time Railway Operations

Chair: *Dennis Huisman*

1 - Robust train scheduling based on the UK network

Banafsheh Khosravi, Julia Bennell, Chris Potts

2 - Dispatching and coordination in real-time railway traffic management

Francesco Corman, Andrea D'Ariano, Dario Pacciarelli, Marco Pranzo

3 - Standardisation of service intention and interfaces for automatic train scheduling

Sabrina Wiedersheim, Gabrio Curzio Caimi, Leo Kroon, Marco Laumanns, Dick Middelkoop

4 - Delay management with passenger re-routing

Twan Dollevoet, Dennis Huisman

■ WC-17

Wednesday, 12:20 - 13:40

1.3.14

Regression and Its Application

Chair: *Pakize Taylan*

1 - Time series forecasting using fuzzy time series approach, neural network models and regression splines

Akhlitdin Nizamitdinov, Memmedaga Memmedli, Ozer Ozdemir

2 - Support vector machine for time series regression

Ange-Michel Poli

■ WC-18

Wednesday, 12:20 - 13:40

1.3.15

Stochastic Models and Optimization

Chair: *Erik Kropat*

1 - Design and planning of green supply chains: a fuzzy approach

Tânia Pinto-Varela, Ana Paula Barbósa-Póvoa, Augusto Novais

■ WC-19

Wednesday, 12:20 - 13:40

1.3.20

Large-scale Mixed Optimization Problems

Chair: *F.-Javier Heredia*

1 - Solving tough instances of the controlled tabular adjustment problem

José Antonio González Alastrué, Jordi Castro

2 - Perspective cuts for solving the optimal electricity market bid problem with bilateral contracts

Eugenio Mijangos, F.-Javier Heredia

3 - On the use of probabilistic algorithms in nonsmooth optimization

Angel A. Juan, Bernardo Ruiz, Helena Ramalinho Lourenço, Javier Faulin, Carlos Mendez

4 - Endogenous model for medium-term electricity generation planning in liberalized mixed markets

Laura Marí, Narcis Nabona

■ WC-20

Wednesday, 12:20 - 13:40

1.3.33A

Discrete and Global Optimization

Chair: *Gerhard-Wilhelm Weber*

Chair: *Valentin Weber*

1 - Robust quadratic assignment problem and a heuristic to solve it

Mohammad Javad Feyzollahi, Maryam Ghotbaddini, Mohammad Modarres

2 - Optimal adjust of continuous and discrete variables in non-linear programming problems

Edilaine Soler, Geraldo R. M. da Costa

3 - A method for approximating general pairwise comparison matrices by consistent matrices

Janos Fulop

4 - Challenging instances for discrete optimization problems

Valentin Weber, Nadia Brauner, Yann Kieffer

5 - Effective branching rules for linear integer programming models

Elias Munapo

■ WC-21

Wednesday, 12:20 - 13:40

6.2.47

Optimization Algorithms III

Chair: *Tatiana Tchemisova*

1 - A hierarchical segmentation algorithm for image processing

Edwin Zarrazola, Daniel Gomez Gonzalez, Javier Montero, Javier Yanez

2 - Efficient direct-search solvers for single and multiobjective derivative-free optimization

Ana Luisa Custodio, Jose Aguilar Madeira, Humberto Rocha, A. Ismael F. Vaz, Luís Nunes Vicente

3 - An agent-based model of an eco-product market with social interactions and dynamic game pricing schemes

Edward Thommes

4 - Optimization methods and software in study of billiard aerodynamics and reverse magnus effect in free molecular flow

Tatiana Tchemisova

■ WC-22

Wednesday, 12:20 - 13:40

3.1.10

LNG transportation

Chair: *Henrik Andersson*

- 1 - Branch-and-price for creating an annual delivery program (adp) of multi-product liquefied natural gas**

Jørgen Glomvik Rakke, Marielle Christiansen, Henrik Andersson, Guy Desaulniers

- 2 - Long term planning in the lng value chain**

Kristin Tolstad Uggen, Adrian Werner, Marte Fodstad, Arnt-Gunnar Lium

- 3 - A branch-and-price-and-cut algorithm for a maritime liquefied natural gas inventory routing problem**

Henrik Andersson, Marielle Christiansen, Guy Desaulniers

■ WC-23

Wednesday, 12:20 - 13:40

6.2.49

Data Mining in Portfolio Analysis 1

Chair: *Vadim Mottl*

Chair: *Evgeny Bauman*

1 - A mathematical and algorithmic framework for dynamic returns-based style analysis of investment portfolios

Vadim Mottl, Olga Krasotkina, Michael Markov, Ilya Muchnik

2 - Machine-learning for dynamic style analysis of hedge funds

Olga Krasotkina, Vadim Mottl, Michael Markov, Ilya Muchnik

3 - Downside risk optimization via quasi-gradient algorithm

Evgeny Bauman, Michael Markov

4 - Peer group analysis as a clustering problem of portfolio trackers

Marcus Hildmann

■ WC-24

Wednesday, 12:20 - 13:40

6.2.50

Crew Scheduling

Chair: *Silke Jütte*

1 - Integrated airline crew scheduling by a dynamic constraint aggregation method

Mohammed Saddoune, Guy Desaulniers, Issmail Elhallaoui, Francois Soumis

2 - Pricing by local search for the airline crew pairing problem

Nimet Aksoy, S. Ilker Birbil, Kerem Bulbul, Husnu Yenigun

3 - Ground crew rostering with work patterns at a major European airline

Richard Lusby, Anders Dohn, Troels Martin Range, Jesper Larsen

4 - "divide-and-price": a decomposition algorithm for solving huge railway crew scheduling problems

Silke Jütte, Ulrich Thonemann

■ WC-25

Wednesday, 12:20 - 13:40

6.2.48

ROADEF/EURO challenge senior session 2

Chair: *Ender Ozcan*

1 - A hybrid iterative decomposition approach to roadef 2010

Cristiano Nattero, Davide Anghinolfi, Luca Maria Gambardella, Roberto Montemanni, Massimo Paolucci, Nihat Engin Toklu

2 - A mathematical-programming-based solution approach for the edf energy management problem

Francois Soumis, Guy Desaulniers, Michel Gendreau, Louis-Martin Rousseau, François Lessard

3 - High-performance local search for a large-scale energy management problem

Frédéric Gardi, Karim Nouioua

■ WC-26

Wednesday, 12:20 - 13:40

3.1.11

Models of Cooperative Games: Theory and Applications

Chair: *Mariana Rodica Branzei*

1 - Cooperative games under interval uncertainty: on the convexity of the interval undominated cores

Sirma Zeynep Alparslan Gok, Mariana Rodica Branzei, Oana Branzei

2 - Application of cooperative tu-game solution concepts to a partition function game

David Bartl

3 - A value for interval games with multi-choice coalitions: axiomatic characterizations and applications

Mariana Rodica Branzei, Hao Sun, Genjiu Xu

■ WC-27

Wednesday, 12:20 - 13:40

8.2.06

TRANSPORTATION PLANNING

Chair: *Jorge Freire de Sousa*

- 1 - A new model for road accident prediction, based on an adaptive neuro-fuzzy inference system**

Mario Mellano, Mauro Dell'Orco

- 2 - Discrete events simulation of a flexible service for people transportation**

Pasquale Carotenuto, Giovanni Storchi, Artem Serebriany

- 3 - Using travel time predictions for planning and control at public transport companies**

Jorge Freire de Sousa, João Mendes-Moreira

■ WC-28

Wednesday, 12:20 - 13:40

8.2.10

Scheduling with Lags and Setups

Chair: *Alessandro Condotta*

1 - On the complexity of the hybrid flow shop with adjustment

Jan Pelikan

2 - On the complexity of scheduling with negative time lags

Adel Manaa, Claire Hanen

3 - Real-time scheduling of failure-prone manufacturing systems with setup times and costs

Fernando Tubilla, Stan Gershwin

4 - On scheduling multiple-operation jobs with time-lags

Alessandro Condotta, Natalia Shakhlevich

■ WC-29

Wednesday, 12:20 - 13:40

8.2.11

Portfolio Selection

Chair: *David Wozabal*

1 - Set-portfolio selection with the use of market stochastic bounds

Sergio Ortobelli, Enrico Angelelli, Daniele Toninelli

2 - Mining financial time series: new insights from model-based clustering methods

José G. Dias, Jeroen K. Vermunt, Sofia B. Ramos

3 - Optimizing value-at-risk using the difference of convex algorithm

David Wozabal

4 - Usage of conditional capm method for explaining portfolio returns: an application for services, financial and industrial sectors' returns in istanbul stock exchange

Serap Atbas, Melik Kamisli, Guven Sevil

■ WC-30

Wednesday, 12:20 - 13:40

8.2.13

Advances in Quantitative Credit Risk Modeling: Change We Need

Chair: *Bart Baesens*

Chair: *David Martens*

Chair: *Christophe Mues*

1 - Modeling credit rating migrations dependent on the business cycle

Wouter Verbeke, Koen Berteloot, David Martens, Gerd Castermans, Tony Van Gestel, Bart Baesens

2 - Rating banks: a myth resolved

Elisabeth Van Laere, Bart Baesens

3 - Regression model development for exposure at default (ead)

Iain Brown, Christophe Mues, Lyn Thomas

4 - Competing risks survival model for residential mortgage loans

Mindy Leow, Christophe Mues, Lyn Thomas

■ WC-31

Wednesday, 12:20 - 13:40

8.2.15

Industrial applications of scheduling and routing III

Chair: *Geir Hasle*

1 - A novel heuristic for sequencing mixed-model assembly lines

Rico Gujjula, Sebastian Werk, Hans-Otto Guenther

2 - Production scheduling in a multi-page invoice printing system

Jiyin Liu, Yan Zhang, Zhili Zhou

3 - Self-optimization aspects for dynamic scheduling

Ivo Pereira, Ana Madureira

■ WC-32

Wednesday, 12:20 - 13:40

8.2.17

Long-term modelling for agriculture and forestry

Chair: *Nicklas Forsell*

1 - Flexible potential of renewable energy sources in long-term energy planning models

Nicklas Forsell

2 - Retribution of carbon sinks in forest biomass vs stimulation of timber consumption: what impacts on the French forest sector?

Philippe Delacote, Sylvain Cauria

3 - Large-scale modelling of global food security under extreme weather events

Sabine Fuss, Jana Szolgayova, Petr Havlik, Michael Obersteiner

■ WC-33

Wednesday, 12:20 - 13:40

8.2.19

Risk and Uncertainty in Energy Models

Chair: *Dominik Möst*

1 - Optimal gas procurement for a power producer using stochastic programming

Miguel Carrión, Antonio J. Conejo

2 - The impact of renewable capacities on the conventional power plant system in 2030 in Germany

Dominik Möst, Massimo Genoese, Wolf Fichtner

3 - Extending dynamic programming's simulations and regressions approach to value and control a hydropower system

Michel Denault, Jean-Guy Simonato, Lars Stentoft

4 - Extension planning for generation units in a hydrothermal portfolio

Ulf Kasper, Albert Moser

■ WC-34

Wednesday, 12:20 - 13:40

8.2.23

Duality Problems

Chair: *Iqbal Husain*

- 1 - **On weak conjugate maps, fenchel and fenchel lagrange duality, constructed by weak conjugate maps**

Ilknur Atasever, Yalcin Kucuk, Mahide Kucuk

- 2 - **The relations between the optimal objective values of the fenchel, fenchellagrange and lagrange dual problems, constructed by weak conjugate maps, and optimality conditions**

Yalcin Kucuk, Ilknur Atasever, Mahide Kucuk

- 3 - **Dynamic games and symmetric duality in variational problems**

Iqbal Husain

- 4 - **Mixed type symmetric and self duality for multiobjective variational problems with support functions**

Iqbal Husain, Rumana Mattoo

■ WC-35

Wednesday, 12:20 - 13:40

6.2.46

Integer Nonlinear Programming

Chair: *Christoph Buchheim*

1 - Integer programming subject to monomial constraints

Dennis Michaels, Christoph Buchheim, Robert Weismantel

2 - A fast algorithm for convex quadratic integer programming with applications in electronics

Christoph Buchheim, Alberto Caprara, Andrea Lodi

3 - The power of sdp relaxations - computing strong bounds for qaps and graph problems

Hans Mittelmann

■ WC-36

Wednesday, 12:20 - 13:40

3.1.05

Container Terminal Applications

Chair: *Ulrich Dorndorf*

1 - Scheduling freight trains in rail-rail transshipment yards

Erwin Pesch, Nils Boysen, Florian Jaehn

2 - Optimized load planning of trains in intermodal transportation

Florian Bruns, Sigrid Knust

3 - Scheduling triple cross-over stacking cranes in a container yard

Frank Schneider

■ WC-37

Wednesday, 12:20 - 13:40

3.1.09

Territorial Decision Making

Chair: *Florent Joerin*

- 1 - Cohesive groups for cohesive representations : how to structure the problem of urban sprawl ?**

Florent Joerin, Pierre Rondier

- 2 - Approaching investments on gas transmission networks with robustness**

Slawomir Pietrasz

■ WC-38

Wednesday, 12:20 - 13:40

6.2.44

Perishable item inventory management

Chair: *Stefan Minner*

- 1 - Computing replenishment cycle policy parameters for a perishable item with non-stationary stochastic demand under service level constraints**

Karin Pauls-Worm, Roberto Rossi, René Haijema, Jack van der Vorst

- 2 - Modelling two-echelon serial inventory systems with perishable items**

Fredrik Olsson

- 3 - A one warehouse, multiple retailer distribution inventory system for perishable products**

Stefan Minner

- 4 - Computing an optimal ordering policy and deriving an day dependent (s, s) rule for perishables with fixed ordering costs.**

René Haijema, Jan Van Der Wal, Nico van Dijk

■ WC-39

Wednesday, 12:20 - 13:40

6.2.45

Discrete-continuous scheduling

Chair: *Jan Weglarz*

1 - Discrete-continuous project scheduling — a review of recent results

Grzegorz Waligora, Jan Weglarz

2 - Metascheduling of workflow jobs in a computational grid

Marek Mika, Jan Weglarz

3 - Optimal allocation of a non-renewable continuous resource for jobs performed sequentially

Rafal Rozycki

4 - A longitudinal study of the production scheduling literature

Jose M Framinan, Paz Perez Gonzalez, Jose M. Molina-Pariente

■ WC-40

Wednesday, 12:20 - 13:40

6.2.52

Recent Advances in Engineering Optimization

Chair: *Gerhard-Wilhelm Weber*

1 - Predispatch of interconnected hydroelectric power systems with network topology modification

Silvia Carvalho, Aurelio Oliveira, Christiano Lyra

2 - Improvements on hyperbolic smoothing clustering method for application with graphics processing unit

Ricardo Farias, Sergio B. Villas-Boas, Adilson Elias Xavier, Marcelo Signorelli

3 - Modelling the conditional variance of wind farm output utilising realised volatility

John Boland

4 - Investigating optimal eol recall policy for environmentally conscious supply chain network

Vildan Ozkir, Huseyin Basligil

■ WC-41

Wednesday, 12:20 - 13:40

3.1.06

Forestry Management and Long Term Financial Decisions

Chair: *Klaus Seeland*

- 1 - Applying mean-variance rules in the allocation of land use, to avoid deforestation processes in southern ecuador**

Baltazar Calvas, Thomas Knoke

- 2 - Urban forest carbon balance optimization - the case of lahti, finland**

Antti Mäkinen

- 3 - Real option valuation of forest plantation investments in Brazil**

Markku Kallio, Markku Kuula

- 4 - Regional forest organizations and their financial impact on forestry and small forest owners in central switzerland**

Klaus Seeland

■ WC-42

Wednesday, 12:20 - 13:40

3.1.07

Graph Cleaning

Chair: *Pawel Pralat*

1 - The fast searching problem

Boting Yang

2 - Cleaning graphs with brushes

Margaret-Ellen Messinger

3 - Minors for digraphs

Paul Hunter

4 - Copwin edge critical graphs

Shannon Fitzpatrick

■ WC-43

Wednesday, 12:20 - 13:40

8.2.02

Sustainable Development in Civil Engineering and Multiattribute

Chair: *Tatjana Vilutiene*

1 - Birstonas first eco-town in lithuania: from the idea to the eco-life project

Tatjana Vilutiene, Vaidotas ?arka, Darius Biekša, Edita ?arkien?

2 - Multi-criteria assessment of design projects' managers by applying AHP and additive rational assessment (aras) methods

Zenonas Turskis, Povilas Vainiunas, Edmundas Kazimieras Zavadskas, Jolanta Tamosaitiene

3 - Multi-objective stochastic simulation-based optimisation applied to supply chain planning

Liana Napalkova, Galina Merkuryeva

4 - Water supply regional management by stochastic programming

Leonidas Sakalauskas, Kestutis Zilinskas

■ WC-44

Wednesday, 12:20 - 13:40

8.2.03

Dynamical Systems and Mathematical Modelling in OR I

Chair: *Selma Belen*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Erik Kropat*

1 - Electrical energy optimization in spacecraft attitude control system using proper configuration of actuators

M. Navabi, N. Nassiri

2 - Organization and innovation: a system dynamics approach

Boada Alejandro, Nancy Mahecha, Maria Teresa Sequeda, Saldana Carolina

3 - Superneutrality on the transition path in a cash-in-advance model with recursive utility

Kenji Miyazaki

4 - Modeling the diffusion of chain emails

Alexandros Kainich, John Coletsos

■ WC-45

Wednesday, 12:20 - 13:40

8.2.12

Category and Shelf Space Management

Chair: *Heinrich Kuhn*

Chair: *Michael Sternbeck*

1 - Coordinating category management and store operations through extended planograms

Rob Broekmeulen

2 - Retail demand and supply planning with shelf space and price management

Alexander Hübner, Heinrich Kuhn

3 - Shelf space driven assortment planning for seasonal consumer goods

Joern Meissner, Kevin Glazebrook, Jochen Schurr

4 - Simulating shoppers' behavior for managers' training.

Maximo Bosch, Alejandra Puente

■ WC-46

Wednesday, 12:20 - 13:40

8.2.14

Numerical methods for derivatives pricing and hedging

Chair: *Michèle Vanmaele*

1 - Pricing American call options under the assumption of stochastic dividends

Susanne Kruse, Marlene Mueller

2 - Hedging in the interest rate market and the commodity market

Nele Vandaele, Kathrin Glau, Peter Leoni

3 - Vanna-volga methods applied to fx derivatives: from theory to market practice

Griselda Deelstra, Frédéric Bossens, Gregory Rayee, Nikos Skantzos

4 - Local volatility pricing models for long-dated fx derivatives

Gregory Rayee, Griselda Deelstra

■ WC-47

Wednesday, 12:20 - 13:40

8.2.16

Data Mining in Early Warning Systems I

Chair: *Tobias Klatt*

- 1 - A trapezoidal fuzzy dematel-approach to assess dependencies among sub-indicators of a hierarchical disaster indicator model for indirect industrial disaster vulnerability**

Michael Hiete, Mirjam Merz, Frank Schultmann

- 2 - An empirical causality procedure for objective early indicator identification**

Tobias Klatt, Klaus Moeller, Judith Huelle

■ **WD-02**

Wednesday, 14:00 - 15:20

3.2.14

Keynote Talk 12

Chair: *Ulrike Leopold-Wildburger*

1 - Computational complexity of stochastic programming

Alexander Shapiro

■ WD-04

Wednesday, 14:00 - 15:20

3.2.13

Constructive and local search methods

Chair: *Philippe Lacomme*

Chair: *Fernanda Raupp*

1 - Intensive local search procedure: a new point-to-point metaheuristic for constrained continuous global optimization

Fernanda Raupp, Wendel Melo, Marcia Fampa

2 - Implementing 2-opt based tabu search on sparse asymmetric tsps

Sumanta Basu, Diptesh Ghosh

3 - A new greedy approach to the quadratic assignment problem (qap)

Theodoros Gevezes

4 - A new heuristic for the minimization of tool switches problem

Edson Senne, Antonio Chaves, Horacio Yanasse

■ **WD-05**

Wednesday, 14:00 - 15:20

3.2.16

Electronics

Chair: *Marc Sevaux*

Chair: *André Rossi*

1 - Implementation of the umts technology in the gsm existing network: capacity/interference optimization

Abdellah El Fallahi

2 - Exact and metaheuristic approaches for memory cache management

Maria Soto, André Rossi, Marc Sevaux

3 - Point coverage, sink location, and data routing problems in wireless sensor networks: MILP formulations and solutions

Kuban Altinel, Necati Aras, Evren Guney, Cem Ersoy

4 - Multi-objective optimization of memory built-in-self-test sharing

Yann Kieffer, Zaourar Lilia, Nadia Brauner

■ **WD-06**

Wednesday, 14:00 - 15:20

8.2.30

DEA Application VII - Retailing and health

Chair: *Stella Sofianopoulou*

1 - Assessment for teaching and medical integrated activities inside Brazilian university hospitals

Angela Silva, Marcos Estellita Lins, Maria Stella Castro Lobo, Roberto Fiszman

2 - The assessment of retailing efficiency using network data envelopment analysis

Clara Vaz, Ana Camanho, Rui Guimarães

3 - Analyses of investment efficiency using network DEA

Hirofumi Amatatsu, Tohru Ueda

4 - Retail chain performance evaluation using data envelopment analysis

Vassilis Dedoussis, Stella Sofianopoulou

■ WD-07

Wednesday, 14:00 - 15:20

8.2.47

Project Scheduling

Chair: *Premysl Sucha*

1 - Time-cost tradeoffs under time and cost chance constraints

Zohar Laslo, Gregory Gurevich

2 - Social network analysis of project partnership

Blazenka Divjak, Nina Begicevic, Petra Peharda

3 - Flexible human resource management through decision support systems - a case-study in a contact center outsourcer

João Justino, Joao Telhada

■ WD-08

Wednesday, 14:00 - 15:20

6.1.36

Various Advances on Management and Scheduling II

Chair: *Erwin Pesch*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Edmund Burke*

1 - Evaluation and comparison of project management software

Vassilis Kostoglou

2 - On resource complementarity in activity networks — preliminary results

Helder Silva, Anabela Pereira Tereso, José Oliveira

3 - Forming a balanced team

Stanislaw Walukiewicz

4 - Modular operational support system (oss) to cutting processes parameters optimization

Elesandro Baptista, Nivaldo Coppini, Êmili Haguihara

■ WD-09

Wednesday, 14:00 - 15:20

6.2.53

Convex Duality in Mathematical Programming

Chair: *Sorin-Mihai Grad*

Chair: *Gerhard-Wilhelm Weber*

1 - On a zero duality gap result in extended monotropic programming

Radu Ioan Bot, Ernő Robert Csetnek

2 - Duality for vector optimization problems via a general scalarization

Sorin-Mihai Grad, Radu Ioan Bot

3 - Conjugate duality in multiobjective optimization

Gert Wanka

4 - A new and condensed linearization algorithm for an important branch of linear fractional programming problem

Reena Kapoor

■ WD-11

Wednesday, 14:00 - 15:20

8.2.38

Advances in the Use of Information Technology IV

Chair: *Sevgi Ozkan*

Chair: *Gerhard-Wilhelm Weber*

1 - Verification of the validity on the pattern of royal e-customer purchasing behavior

Masashi Nakagawa, Hong Seung Ko, Shasha Liu, Megumi Hiramoto, Takeshi Teramoto

2 - Verification of the validity on the 7 steps of e-customer behavior

Haruki Takada, Hong Seung Ko

3 - Quantile analysis for multidimensional acceptance intention of e-reader

Tzyy Jane Lai, Hsien-Tung Tsai, Ya-Ling Chiu

4 - Ranking medical equipment for protection against earthquakes: a multicriteria approach

Rui Oliveira, Miguel Snow

■ WD-12

Wednesday, 14:00 - 15:20

8.2.39

AHP 08

Chair: *Eizo Kinoshita*

1 - Evaluation of information security and efficient system using dominant AHP

Norikumo Shunei, Eizo Kinoshita

2 - Determining mdf & particleboard's marketing effective criteria

Majid Azizi, Fatemeh Sarfi, Mehdi Faezipour, Amin Arian

3 - A super pairwise comparison matrix in dominant AHP

Takao Ohya, Eizo Kinoshita

4 - A comparison of dominant ahp/ccm and ahp/anp

Eizo Kinoshita

■ **WD-13**

Wednesday, 14:00 - 15:20

2.2.21

Decision support for practical logistics problems

Chair: *Hokey Min*

1 - An intelligence decision support system for paratransit service vehicle routing and scheduling

Hokey Min, Emanuel Melachrinoudis

2 - Truck routing and driver scheduling under hours of service regulations

Emanuel Melachrinoudis, Hokey Min

3 - Locating a semi-obnoxious facility with mixed distance metrics

Emre Yavuz, Emanuel Melachrinoudis

4 - Theory of constraints for closed-loop supply chain management

Hokey Min

■ WD-14

Wednesday, 14:00 - 15:20

2.2.15

Stochastic methods in actuarial sciences

Chair: *Griselda Deelstra*

1 - On a discrete time risk model with interest

Maude Gathy, Claude Lefèvre

2 - Local risk minimization in case of stochastic volatility and jumps

Michèle Vanmaele, Nele Vandaele

3 - Absolute ruin in the insurance risk model of ornstein-uhlenbeck type

Ronnie Loeffen, Pierre Patie

4 - Backward stochastic differential equations and stochastic control: a direct approach and an application to portfolio optimization

Xavier De Scheemaekere

■ WD-15

Wednesday, 14:00 - 15:20

2.2.12

Traveling salesman problems

Chair: *Ana Paias*

1 - Towards a learning-based heuristic searching reform scheme

Fan Xue, C.y. Chan, W.h. Ip, C.f. Cheung

2 - Sampling-based heuristics for the probabilistic traveling salesman problem with deadlines

Dennis Weyland

3 - Solving the multicolor TSP

Emanuele Tresoldi, Roberto Wolfler-Calvo, Sylvie Borne

4 - Integer linear programming and dynamic programming approaches for a traveling purchaser problem with additional side-constraints

Ana Paias, Luis Gouveia, Stefan Voss

■ **WD-16**

Wednesday, 14:00 - 15:20

2.2.14

Network Design for Road Transportation

Chair: *Mariano Gallo*

1 - A scatter search algorithm for solving the road network design problem

Mariano Gallo, Luca D'Acierno, Bruno Montella

2 - A multiobjective metaheuristic approach to support the rural network planning

Pablo Maya

■ **WD-17**

Wednesday, 14:00 - 15:20

1.3.14

Data Mining Tools and Improvements

Chair: *Fatma Yerlikaya Ozkurt*

Chair: *Elcin Kartal Koc*

1 - Parameter estimation for semiparametric models with cmars and its applications

Fatma Yerlikaya Ozkurt, Pakize Taylan, Gerhard-Wilhelm Weber

2 - An aco-based clustering algorithm

Tulin Inkaya, Sinan Kayaligil, Nur Evin Ozdemirel

■ **WD-18**

Wednesday, 14:00 - 15:20

1.3.15

Data Mining for Credit Scoring

Chair: *Hsin-Vonn Seow*

1 - Recovery rate modelling for unsecured consumer credit: watching early repayment behaviour pays

Jie Zhang, Lyn Thomas

2 - Transactors and pricing

Hsin-Vonn Seow, Lyn Thomas

■ WD-19

Wednesday, 14:00 - 15:20

1.3.20

Nonsmooth and Nonconvex Optimization Methods

Chair: *Marko M. Mäkelä*

Chair: *Napsu Karmitsa*

1 - Truncated codifferential method for nonsmooth nonconvex optimization

Adil Bagirov

2 - A new trust region algorithm using radial basis function models

Seppo Pulkkinen

3 - Sparse regression via a trust-region proximal method

Dongmin Kim, Suvrit Sra, Inderjit Dhillon

4 - Comparing nonsmooth optimization methods and software

Napsu Karmitsa, Adil Bagirov, Marko M. Mäkelä

■ **WD-21**

Wednesday, 14:00 - 15:20

6.2.47

Social Policy and Education

Chair: *Hanife Akar*

1 - Performance management and school achievement in Portuguese secondary schools

Cláudia S. Sarrico, Maria J. Rosa, Margarida F. Cardoso

2 - Efficacy beliefs of teachers to optimize learning opportunities: incentives for teacher education policy-making

Hanife Akar, Feyza Erden

■ WD-22

Wednesday, 14:00 - 15:20

3.1.10

Maritime Vessel Routing and Deployment

Chair: *Jose Fernando Alvarez*

1 - The linearized simultaneous string-design and cargo-routing problem

Christian Edinger Munk Plum

2 - Improving the logistics of moving empty containers - can new concepts avoid a collapse in container transportation?

Stefan Voss, Robert Stahlbock

3 - Ship scheduling

Fotini Malliappi, Chris Potts

4 - Simultaneous deployment and network design in liner shipping: formulation and solution method

Shahin Gelareh, David Pisinger

■ WD-23

Wednesday, 14:00 - 15:20

6.2.49

Data Mining in Portfolio Analysis 2

Chair: *Vadim Mottl*

Chair: *Michael Markov*

1 - Portfolio calibration approach for asset allocation and financial optimizations

Michael Markov, Evgeny Bauman

2 - Statistical analysis for style drift concept

Ilya Muchnik, Megan Woods, Evgeny Bauman, Michael Markov

3 - Edge-preserving kalman-bucy filtration and smoothing of return time series: detection of hidden events in the investment strategy

Olga Krasotkina, Vadim Mottl, Michael Markov

4 - Variable selection in model-based clustering using penalized mixtures of t-distributions and an application to financial market segmentation

Alberto Cozzini, Giovanni Montana

■ WD-24

Wednesday, 14:00 - 15:20

6.2.50

Practical Issues in Timetabling

Chair: *Geoffrey Forster*

1 - Determining most convenient and optimal timetable by assigning difficulty index

Harshita Agarwal, Nitish Shangari, Saurabh Shekhar

2 - Individual student timetables: what has been implemented in syllabus plus and lessons learnt.

Geoffrey Forster

3 - An integer programming approach for classroom infrastructure planning

Pablo A. Rey, Jaime Miranda

4 - A procedure to determine work-team cross-training goals to cope with production mix variation and employee absence

Jordi Olivella, David Nembhard

■ WD-25

Wednesday, 14:00 - 15:20

6.2.48

ROADEF/EURO challenge senior session 3

Chair: *Eric Bourreau*

1 - A column generation approach for scheduling nuclear power plants refueling

Roberto Wolfler-Calvo, Lucas Létocart, Laurent Alfandari, Antoine Rozenkop, Daniel Chemla, Guillaume Turri

2 - Csp and greedy algorithm for a large-scale energy management problem with varied constraints

Mirsad Buljubasic, Haris Gavranovic, Faik Catibusic, Ibrahim Numanagic

3 - Hybrid constraint programming/local search for a large-scale energy management problem with varied constraints

Hadrien Cambazard, Emmanuel Hebrard, Barry O'Sullivan

4 - A functional programming approach for an energy planning problem

Valentin Weber, Julien Darlay, Yann Kieffer, Louis Esperet, Guyslain Naves

■ WD-26

Wednesday, 14:00 - 15:20

3.1.11

New Achievements in Game Theory II (cooperative and noncooperative)

Chair: *Mariana Rodica Branzei*

Chair: *Sirma Zeynep Alparslan Gok*

Chair: *Gerhard-Wilhelm Weber*

1 - Parametric direct mechanisms for joint replenishment

Evren Korpeoglu, Alper Sen, Kemal Guler

2 - On taxes for atomic network games with heterogeneous users

George Karakostas, Dimitris Fotakis, Stavros Kolliopoulos

3 - Fair and efficient equilibrium in collective actions

Dongbin Huang, Hans Rudolf Heinemann

4 - Downsian competition with an arbitrary number of parties

Tom Blockmans, Mark Van Lokeren

■ **WD-27**

Wednesday, 14:00 - 15:20

8.2.06

TRAFFIC MANAGEMENT

Chair: *Riccardo Rossi*

1 - Analysis of gap-acceptance behavior at road junctions: experiments with a driving simulator

Massimiliano Gastaldi, Riccardo Rossi, Claudio Meneguzzer

2 - Roundabouts performance estimation: an experimental comparative analysis for different methodologies

Roberto Camus, Massimiliano Gastaldi, Giovanni Longo, Riccardo Rossi

3 - The effect of information quality on travelers' behavior in atis context of choice

Roberta Di Pace, Gennaro Nicola Bifulco

4 - An empirical analysis of vehicle time headways on rural two-lane two-way roads

Riccardo Rossi, Massimiliano Gastaldi, Riccardo Maratini

■ WD-28

Wednesday, 14:00 - 15:20

8.2.10

Scheduling in Production and Communication

Chair: *Celia Glass*

1 - Experimental evaluation of the work function algorithm for solving the on-line k-server problem

Robert Manger, Tomislav Rudec, Alfonzo Baumgartner

2 - Scheduling with identical machines and servers

Wafaa Labbi, Mourad Boudhar

3 - Optimization of schedules for a multi-task production cell

Karin Thornblad, Ann-Brith Strömberg, Michael Patriksson, Torgny Almgren

4 - Periodic scheduling for wireless mesh networks

Celia Glass, Eun-Seok Kim

■ WD-29

Wednesday, 14:00 - 15:20

8.2.11

Information and Ambiguity in Financial Modeling

Chair: *Georg Pflug*

1 - Multi-period acceptability functionals: the role of information monotonicity

Raimund Kovacevic

2 - Ambiguity and minimaxity in portfolio selection and

Georg Pflug, David Wozabal, Alois Pichler

3 - Minimum var and minimum cvar optimal portfolios: estimation and inference procedure

Taras Bodnar, Wolfgang Schmid, Taras Zabolotskyy

4 - P-order conic programming in stochastic optimization

Pavlo Krokhmal

■ WD-30

Wednesday, 14:00 - 15:20

8.2.13

OR methods in portfolio management and asset allocation

Chair: *David Pla-Santamaria*

- 1 - Downside risk: how to select efficient portfolios from dow jones blue chips by the mean-semivariance efficient frontier model (e-sv)**

Mila Bravo, David Pla-Santamaria

- 2 - Portfolio selection with multiple time horizons: a stochastic goal programming approach**

Antonio Benito, Ana Garcia-bernabeu, Ignacio Gonzalez

- 3 - Asset allocation for standard and non-standard ethical investors**

Verónica Cañal, Celia Bilbao, Mar Arenas-Parra, Maria Victoria Rodriguez Uria

■ **WD-33**

Wednesday, 14:00 - 15:20

8.2.19

Decision making under model uncertainty

Chair: *Pauline Barrieu*

Chair: *Max Fehr*

1 - Assessing cleanup costs

Bernard Sinclair-Desgagné, Pauline Barrieu

2 - A Monte Carlo method for problems of optimal stochastic control with convex value functions

Juri Hinz

■ WD-35

Wednesday, 14:00 - 15:20

6.2.46

MINLP - Problem-specific Approaches

Chair: *Sarah Drewes*

1 - An mip approach to gas network optimization

Bjoern Geissler, Alexander Martin, Antonio Morsi, Lars Schewe

2 - Decomposition techniques for minlps on loosely coupled networks

Antonio Morsi, Bjoern Geissler, Alexander Martin, Lars Schewe

3 - Mixed 0/1-kelly criterion: geometric mean maximization revisited

Sebastian Pokutta, Sarah Drewes

4 - On bound computations for minlp

David M. Gay

■ **WD-36**

Wednesday, 14:00 - 15:20

3.1.05

Linear and Conic Programming I

Chair: *Gerhard-Wilhelm Weber*

Chair: *Sergei Chubanov*

1 - An approach based on conic formulation and mc technique for the time-cost trade-off problem

Mohammad Reza Peyghami

2 - Finding the extrema of continuous piecewise linear functions

Özge Arslan, Metin Turkey

3 - Divide and conquer: a polynomial algorithm for linear programming

Sergei Chubanov

■ **WD-37**

Wednesday, 14:00 - 15:20

3.1.09

Application of outranking approach for sustainable development

Chair: *Pascal Oberti*

Chair: *Jean-François Noël*

1 - Sustainable development, economics and multicriteria evaluation: which links with the outranking approach?

Jean-François Noël, Pascal Oberti

2 - Application of electre is method to photovoltaic plant projects selection in corsica

Pierrick Haurant, Pascal Oberti, Marc Muselli

3 - Management effectiveness assessment in marine protected areas: practices and feasibility of an outranking approach

Ange-Michel Poli, Jean-François Noël, Pascal Oberti

■ **WD-38**

Wednesday, 14:00 - 15:20

6.2.44

Recent Advances in Spare Parts Inventory Management

Chair: *Joern Meissner*

1 - Traditional and non-traditional methods of forecasting lumpy demand: inventory control implications

Adriano Solis, Somnath Mukhopadhyay, Rafael S. Gutierrez

2 - Service parts inventory control with lateral transshipment that takes time

Guangyuan Yang, Rommert Dekker

3 - Demand categorization for safety stock planning of spare parts

David Bucher, Joern Meissner

■ WD-39

Wednesday, 14:00 - 15:20

6.2.45

Scheduling and lotsizing under uncertainties I

Chair: *Alexandre Dolgui*

Chair: *Mikhail Kovalyov*

1 - A lot-sizing and scheduling problem under uncertainties

Alexandre Dolgui, Kseniya Schemeleva, Frédéric Grimaud

2 - Batching work and rework processes to minimize the makespan

Frank Werner, Irina Gribkovskaia, Sergey Kovalev

3 - Heuristics for an integrated production and maintenance planning problem

Marouane Alaoui Selsouli, Najib. M. Najid, Abdelmoula Mohafid

4 - Push and pull heuristics for remanufacturing with yield uncertainty

Erwin van der Laan

■ WD-40

Wednesday, 14:00 - 15:20

6.2.52

Recent Advances in Industrial and Engineering Optimization I

Chair: *Gerhard-Wilhelm Weber*

- 1 - Stream mapping value (mvs) applied to improve productivity and minimize waste in a tool for stamping maker**

Milton Vieira Junior, Nivaldo Coppini, Marcelo Bonandi

- 2 - Cellular manufacturing application in bosch diesel systems injector plant**

Zerin Turgut, Ihsan Ozer, Burak Erismis, Halil Özbey, Cem Tangil

- 3 - An efficient model for multiobjective cell formation in group technology**

Dmitry Krushinsky, Boris Goldengorin

- 4 - Reliability and sensitivity analysis of a repairable system with imperfect coverage and service pressure**

Kuo-Hsiung Wang

■ **WD-41**

Wednesday, 14:00 - 15:20

3.1.06

Monte Carlo and Malliavin Calculus

Chair: *Henry Schellhorn*

- 1 - An algorithm for the pricing of path-dependent American options using malliavin calculus**

Henry Schellhorn

- 2 - A table method for random variate generation**

Yusuf Bayraktar, Wolfgang Hörmann

■ **WD-42**

Wednesday, 14:00 - 15:20

3.1.07

Cops and Robber Games

Chair: *Nancy Clarke*

1 - Characterizations of k-copwin graphs

Nancy Clarke, Gary MacGillivray

2 - The watchman problem

Bert Hartnell

3 - Graph searching games for the wdm reconfiguration problem

David Coudert

4 - Graph searching and graph decompositions

Nicolas Nisse

■ **WD-43**

Wednesday, 14:00 - 15:20

8.2.02

Life Insurance, Risk Management & OR

Chair: *Angelika May*

1 - Credit risk approach to value R&D projects in the pharmaceutical industry

Nora Lisse, Angelika May

2 - Intersections of ruin probabilities with respect to the initial surplus

Tatjana Slijepcevic-Manger

3 - On devising an alarm system for insurance companies

Shubhabrata Das, Marie Kratz

4 - Interactive selection on multidimensional interval data

Kurt Nielsen, Jens Leth Hougaard

■ **WD-44**

Wednesday, 14:00 - 15:20

8.2.03

Dynamical Systems and Mathematical Modelling in OR II

Chair: *Selma Belen*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Erik Kropat*

1 - Automated traders in commodities electronic markets

Fodil Laib

2 - A discussion on the Hamiltonian dynamical systems, integrable systems and dynamical system of diffusion of information

Selma Belen, Gerhard-Wilhelm Weber, Erik Kropat

3 - A dynamic model for evaluating the effects of piracy in film industries

Sercan Oruc

4 - A system dynamic approach in managing the levels of neurotransmitter for patients with chronic depression

Armagan Bayram, Dicle Cevizci, Canan Herdem

■ **WD-45**

Wednesday, 14:00 - 15:20

8.2.12

Logistics and Promotions Management

Chair: *Rob Broekmeulen*

1 - Modelling a logistics problem in retailing industry under uncertainty in an operational level

Yousef Ghiami, Yue Wu

2 - Hedging retail promotions - bidding coordinating contracts into a pull supply chain with retailer power

Arnd Huchzermeier, Andreas Breiter

3 - Markdown optimization in a retail chain under demand substitution

Ozlem Cosgun, Ufuk Kula

4 - The use of generalized additive models for demand forecasting

Amirhossein Sadoghi

■ **WD-46**

Wednesday, 14:00 - 15:20

8.2.14

Approximation of Probabilities for Exotic and Compound Options

Chair: *Ömür Ugur*

Chair: *Susanne Griebisch*

1 - The evaluation of European compound option prices under stochastic volatility using fourier transform techniques

Susanne Griebisch

2 - The evaluation of swing contracts with regime switching

Boda Kang, Carl Chiarella, Les Clewlow

3 - A new unscented kalman filter with higher order moment-matching

Ksenia Ponomareva, Paresh Date, Zidong Wang

■ **WD-47**

Wednesday, 14:00 - 15:20

8.2.16

Data Mining in Early Warning Systems II

Chair: *Ozlem Ilk*

1 - Risk analysis study of maritime traffic in the strait of istanbul

Birnur Ozbas, Ilhan Or, Tayfur Altiok, Ozgecan S. Uluscu

2 - Trouble condition sign mining for hydroelectric power plants

Takashi Onoda

3 - Statistical early warning systems for company failure

Ozlem Ilk, Deniz Akinc, Murat Cinko, Didem Pekkurnaz

■ WE-02

Wednesday, 15:40-17:00

3.2.14

EURO Management Science Strategic Innovation Prize (MSSIP 2010) on the topic of Optimization in Telecommunications

Chair: *Eric Gourdin*

1 - MSSIP 2010

MSSIP 2010 Winner

■ WE-05

Wednesday, 15:40-17:00

3.2.16

Tools for metaheuristics

Chair: *Lars Magnus Hvattum*

Chair: *Frédéric Gardi*

1 - Toward local search programming: localsolver 1.0

Frédéric Gardi, Thierry Benoist, Bertrand Estellon, Karim Nouioua

2 - A theoretical and empirical study of evolutionary squeaky wheel optimisation (eswo)

Jingpeng Li, Andrew J. Parkes, Edmund Burke

3 - Graphic processor unit accelerated simulated annealing framework

Fatih Nar, Erdal Yilmaz

4 - Robust optimization via robust local search

Kwong Meng Teo, Dimitris Bertsimas

■ WE-06

Wednesday, 15:40-17:00

8.2.30

DEA Application VIII — Software

Chair: *Ali Emrouznejad*

1 - An algorithm for DEA

José Dulá

2 - Furnas rcm program's validation and quantitative corrections using data envelopment analysis

Marcio Mariano Junior, Magno Silverio Campos, Joao Flavio F. Almeida

3 - New model designer of deaos

Mohammad Reza Alirezaee, Ali Niknejad, Nassrin Alirezaee

■ WE-08

Wednesday, 15:40-17:00

6.1.36

Various Advances on Management and Scheduling III

Chair: Ayse Elvan Bayraktaroglu

1 - Assembly line balancing with outsourcing

Rifat Gürçan Özdemir, Ufuk Kula

■ WE-13

Wednesday, 15:40-17:00

2.2.21

Hub Location

Chair: *Elena Fernandez*

1 - Models for a single-assignment hub location problem with capacity levels

Isabel Correia, Stefan Nickel, Francisco Saldanha-da-Gama

2 - Multimodal hub location and hub network design

Sibel A. Alumur, Bahar Yetis Kara, Oya Ekin-Karasan

3 - The dynamic uncapacitated hub location problem

Ivan Contreras, Jean-François Cordeau, Gilbert Laporte

4 - Hub location problems with role dependent objectives

Justo Puerto, Antonio Manuel Rodríguez-Chía, Ana Bel Ramos-Gallego

■ WE-14

Wednesday, 15:40-17:00

2.2.15

Industrial Applications in Risk Management

Chair: *Eleni Pratsini*

Chair: *Marco Laumanns*

1 - From optimal solutions to smart decisions

Alain Chabrier

2 - Closing the gap between tactical ERP / mrp planning and operational execution in production industries — a simulation-based approach

Ulrich Schimpel, Satyadeep Vajjala, Manuel Parente

3 - A Markov decision model for strategic resource management of power grid operators

Michael Guarisco, Marco Laumanns, Rico Zenklusen

4 - Web-based expert elicitation in Bayesian networks

Lea Deleris, Debarun Bhattacharjya, Bonnie Ray

■ WE-15

Wednesday, 15:40-17:00

2.2.12

Vehicle Routing and Set Covering Models

Chair: *Rita Macedo*

1 - Consumer dispersion and logistics costs in various distribution systems

Marcel Turkensteen

2 - On generation of routes for set-covering-based approach for solving capacitated vrp

Milan Stanojevic, Gordana Savic

3 - Column generation based heuristic with heuristic pricing for capacitated vehicle routing problem

Cristián Cortés, Pablo A. Rey

4 - Relaxation induced methods based on column generation for vehicle routing problems

Rita Macedo, Cláudio Alves, J. M. Valério de Carvalho, Saïd Hanafi

■ WE-17

Wednesday, 15:40-17:00

1.3.14

Recent OR Advances by Statistics, Probability and Performance Measures

Chair: *Pakize Taylan*

Chair: *Gerhard-Wilhelm Weber*

1 - New empirical likelihood methods with applications

Gregory Gurevich, Yossi Hadad

2 - Methods based on mathematical optimization for semi-supervised data classification

Burak Ordin, Nur Uylas

3 - Lottery data analysis using hierarchical decision-making model

Ulas Beldek, Kemal Leblebicio?lu

■ WE-18

Wednesday, 15:40-17:00

1.3.15

Data Mining Applications in Business Intelligence

Chair: *Richard Weber*

1 - Business intelligence in electronic commerce — case study

Dragana Becejski-Vujaklija

2 - Forecasting and management of hospital service demand

Richard Weber, Oscar Barros, Eduardo Ferro, Carlos Reveco

3 - Improving execution time and accuracy for ip classification problems in large data sets

Jaime Miranda, Richard Weber, Daniel Espinoza

4 - A 3pl providers classification model considering categorical variables on the use of information and communication technologies

Mônica M. M. Luna, Carlos Ernani Fries

■ WE-19

Wednesday, 15:40-17:00

1.3.20

Nonsmooth Global Optimization

Chair: *Alexander Kruger*

1 - Asymptotic stability in optimal control problems with time delay

Musa Mammadov

2 - Using extended cutting angle and penalty methods for solving semi-infinite programming problems

Albert Ferrer

3 - Direct search filter methods

Aldina Correia, João Matias, Pedro Mestre, Carlos Serôdio

■ WE-20

Wednesday, 15:40-17:00

1.3.33A

Social Networks

Chair: *Armando Mendes*

Chair: *Matthias Funk*

1 - Large social networks visualization using the algorithm of the spanning tree with maximum number of leaves

Luís Cavique, Armando Mendes

2 - Combining data mining algorithms for web recommendation

A. Jorge Morais

3 - Integration of different cliques of proverbial knowledge

Matthias Funk, Luís Cavique

4 - Hierarchical clique analysis in social networks due to common knowledge of proverbs

Armando Mendes, Matthias Funk

■ WE-21

Wednesday, 15:40-17:00

6.2.47

Education and Sustainable Development

Chair: *Hanife Akar*

1 - Mind the gap: modelling learning in a professional curriculum

Jo Smedley

2 - Unemployment similarities among Portuguese regions — a cluster analysis approach

Elisa Barros, Alcina Nunes

3 - Need for educational policy-making for the sustainable development of children living in poverty

Hanife Akar, Aysegul Ozsoy

■ WE-22

Wednesday, 15:40-17:00

3.1.10

Maritime Logistics: Theory and Practice

Chair: *Heng-Soon Gan*

1 - Robust short-sea ship routing and scheduling

Cristina Requejo, Agostinho Agra, Marielle Christiansen, Rosa Maria Figueiredo, Lars Magnus Hvattum

2 - Optimizing schedules for cooperative engagements from a united states navy sea base

Javier Salmeron, Jeffrey Kline, Greta S. Densham

3 - Discrete time models for an inventory ship routing problem

Agostinho Agra, Marielle Christiansen, Henrik Andersson

4 - A multi-product inventory routing problem with varying consumption rates

Heng-Soon Gan, Henrik Andersson, Marielle Christiansen

■ WE-24

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6.2.50

Educational Timetabling

Chair: *Tiago Pais*

1 - University course timetabling using graph colouring heuristics

Khodakaram Salimifard, Salman Babaei

2 - University course scheduling with expanding campus

Loo Hay Lee, Hung Hui-Chih, Kien-Ming Ng, Ek Peng Chew

3 - Using choquet integral to combine different heuristic values for the exam timetabling problem

Tiago Pais, Edmund Burke

■ WE-25

Wednesday, 15:40-17:00

6.2.48

ROADEF/EURO challenge senior session 4

Chair: *Christian Artigues*

1 - Roadef/euro challenge 2010: final result announcement

Christian Artigues, Eric Bourreau, H. Murat Afsar, Ender Ozcan, Guillaume Dereu

■ WE-26

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3.1.11

Game Theory and Social Choice

Chair: *Dorota Marciniak*

1 - Cooperation in a group pursuit game

Yaroslavna Pankratova

2 - Probabilistic power indices for games with abstention

Josep Freixas, Daniel Palacios

3 - A power analysis for voting games with consensus

Dorota Marciniak, Josep Freixas

■ WE-28

Wednesday, 15:40-17:00

8.2.10

Scheduling under Resource Constraints

Chair: *Can Akkan*

1 - New models for the multi-skill project scheduling problem

Carlos Montoya, Odile Bellenguez-Morineau, David Rivreau

2 - Minimizing ripple effect in single-machine rescheduling due to new operation insertion – a branch-and-bound approach

Can Akkan

■ WE-29

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8.2.11

Financial Modeling

Chair: *Michael Zabarankin*

1 - Does model framework matter?

Andrea Roncoroni

2 - Risk-return portfolio optimization with disutility function

Cristinca Fulga

■ WE-30

Wednesday, 15:40-17:00

8.2.13

Risk measurement and control in volatile financial markets

Chair: *Giorgio Consigli*

1 - Long term financial scenarios, sampling and optimal strategic planning

Giorgio Consigli

2 - A sequential learning method for tracking stochastic volatility

Enza Messina, Giorgio Consigli, Cristina Manfredotti

3 - Optimal dc-type pension fund management

Francesco Sandrini

4 - Credit risk management via stochastic programming

Patrizia Beraldi, Antonio Violi, Giorgio Consigli

■ WE-33

Wednesday, 15:40-17:00

8.2.19

Realistic Production Scheduling I

Chair: *Ruben Ruiz*

1 - Estimation of distribution algorithm flow shop scheduling with lot-streaming and setup times

Ruben Ruiz, Quan-Ke Pan

2 - MILP models and solution approaches for scheduling a chemical batch process

Laura Hege, Céline Gicquel, Michel Minoux

3 - A production scheduling implementation using critical chain method

Zeynep Gergin

■ WE-35

Wednesday, 15:40-17:00

6.2.46

Advances in Mixed-Integer Linear and Nonlinear Programming

Chair: *Leo Liberti*

Chair: *Andrea Lodi*

1 - Sampling issues for intensity modulated radiation therapy (imrt) treatment planning

Humberto Rocha, Joana Matos Dias, Brígida da Costa Ferreira, Maria do Carmo Lopes

2 - De-convexification tightens chr bounds on convex 0-1 quadratic programming problems.

Monique Guignard-Spielberg, Aykut Ahlatcioglu, Michael Bussieck, Mustafa Esen, Alex Meeraus

3 - Request routing and client assignment in content distribution network

Chris Potts, Narges Haghi, Tolga Bektas

■ WE-36

Wednesday, 15:40-17:00

3.1.05

Linear and Conic Programming II

Chair: *Mohammad Reza Peyghami*

Chair: *Gerhard-Wilhelm Weber*

1 - An algorithm for the multiparametric 0-1-integer linear programming problem with interval data

Alejandro Crema, Edgar Peraza

2 - A new complexity result on multiobjective linear integer programming

Victor Blanco, Justo Puerto

3 - Advertisement reservation problem on a relationship-based environment

Ilkay Gultas, Nihan Karaca

4 - A mip for potential conflicts minimization by speed regulations

David Rey, Christophe Rapine, Rémy Fondacci, Sophie Constans

■ WE-37

Wednesday, 15:40-17:00

3.1.09

Robustness concerns and multiple criteria decision aid

Chair: *André Rossi*

1 - On designing a robust electricity distribution network

André Rossi, Alexis Aubry, Mireille Jacomino

2 - A robustness indicator in blending problems

Jorge Aguilera, Stefan Janaqi, Mériam Chébre

3 - Robust ordinal regression of value functions handling interacting criteria

Salvatore Greco, Vincent Mousseau, Roman Slowinski

4 - On the multi-agent job shop scheduling problem

Cyril Briand, Thomas Lehaux

■ WE-38

Wednesday, 15:40-17:00

6.2.44

Issues in Inventory Management Applications II

Chair: *Kelvin T Chirenje*

1 - A study of the inventory models for perishable products in aerospace industry

Ying-Chyi Chou, Hsiao-Wen Chu

2 - Improving the service level in grocery stores: are you the right candidate for item-level rfid tagging

Esma Nur Cinicioglu

■ WE-39

Wednesday, 15:40-17:00

6.2.45

Scheduling and lot sizing under uncertainties II

Chair: *Mikhail Kovalyov*

Chair: *Alexandre Dolgui*

1 - Dynamic lot sizing problem with stochastic production rates and demands

El-Houssaine Aghezzaf

2 - Two-supplier inventory systems with resource constraints

Ekaterina Bulinskaya, Larisa Afanasyeva, Elena Yarovaya

3 - Selecting capacity at the outset and price after uncertainty has been realized

Yigal Gerchak

■ WE-40

Wednesday, 15:40-17:00

6.2.52

Recent Advances in Industrial and Engineering Optimization II

Chair: Gerhard-Wilhelm Weber

1 - Bi-objective assembly line balancing with flexible machines

S.m.t. Fatemi Ghomi, U. Bahalke, M. Karimi-Nasab

■ WE-41

Wednesday, 15:40-17:00

3.1.06

Financial Mathematics and Simulation

Chair: *Gerhard-Wilhelm Weber*

Chair: *Henry Schellhorn*

- 1 - Bayesian and bootstrapped maximum likelihood estimation approaches for arch and ar-arch models of Brazilian financial time series: a performance comparison**

Sandra Cristina Oliveira, Marinho Gomes Andrade

- 2 - Sensitivity analysis in the binomial lattice approach for real options**

Babak Jafarizadeh

- 3 - Studying value at risk (var) models in forecasting the emerging market indices volatilities**

Milad Nozari, Pedram Jahangiry, Sepideh Mohamad Raei Naeeni, Mohsen Bahramgiri

■ WE-42

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3.1.07

Graph Guarding

Chair: *Anthony Bonato*

1 - Meyniel's conjecture

Anthony Bonato

2 - Guarding grids and related graph problems

Pawel Zylinski

3 - Graphs with average degree smaller than $30/11$ are burning slowly

Pawel Pralat

4 - Modeling firefighting with graphs

Stephen Finbow

■ WE-43

Wednesday, 15:40-17:00

8.2.02

Research Aspects Related to Life - Risk and Insurance

Chair: *Irini Dimitriyadis*

Chair: *Gerhard-Wilhelm Weber*

1 - Cumulative prospect theory for the interval of reference points

Renata Dudzinska-Baryla, Donata Kopanska-Brodka

2 - Knowledge discovery vs. domain knowledge: the case of wrong signs

Reza Shahi

■ WE-44

Wednesday, 15:40-17:00

8.2.03

Systems and Mathematical Modelling in OR III

Chair: *Selma Belen*

Chair: *Gerhard-Wilhelm Weber*

Chair: *Erik Kropat*

1 - Using absorbing Markov chain to evaluate the slot customer experiences

Xiaoming Liu, Zhaotong Lian

2 - The analysis of capital stock dynamics by the optimal transformation

Jan Kodera, Quang Van Tran, Miloslav Vosvrda

■ WE-46

Wednesday, 15:40-17:00

8.2.14

AIMMS User Meeting

Chair: *Frans de Rooij*

1 - AIMMS user meeting

Frans de Rooij, Ovidiu Listes, Gertjan de Lange