

IFAC MCPL 2010

University of Coimbra, Department of
Mathematics, Largo D. Dinis, Coimbra, Portugal
Final Programme

08 September 2010

8:30 Secretariat open

Opening Ceremony

09:30 - 10:00 - Anf1

Opening Session

Plenary Session 1

10:00 - 11:00 - Anf1



Sustainability in production & logistics: Progress and methodological challenges

Shimon Nof, Purdue University, USA

Florin George Filip, The Romanian Academy, Romania

Chair: Rui Neves da Silva (APCA, Portugal)

11:00 - 11:30 – Coffee Break

Session 1: Optimization Methods and Simulation Tools I

11:30 - 13:00 - room1

Chair: Thierry Soriano (France)

Simulation and Optimisation of Lift Networks in a Provincial Skiing Resort

FATAH CHETOUANE, Simon Collart Dutilleul (Canada)*

Contribution to the development of supplementary guidelines of embodiment design for roller conveyors

Dorothee Wieczorek*, Bernd Künne (Germany)

An Approach to Study the Value of Information Sharing in a Serial Supply Chain with Decentralised Decision

Mansour RACHED*, Zied BAHROUN, Armand BABOLI, Jean-Pierre CAMPAGNE, belhassen Zouari (Tunisia)

Coordination of Distributed Production Planning and Scheduling Systems

Chaojun Xu*, Guido Sand, Sebastian Engell (Germany)

Session 2: Production Control 1

11:30 - 13:00 – room2

Chair: J.A.M. Felipe de Sousa (Portugal)

Development of a holistic concept using mobile and stationary sensors to determine the condition of intralogistic systems

Jan Eggert*, Bernd Künne (Germany)

Case Study on Simulation Analysis of a Multiple Product Manufacturing System

Juraj Švančara*, Zdenka Kralová (Slovakia)

Model Reference Adaptive Control Applied to the Improvement of the Operational Conditions of a Sucker Rod Pump System

Luiz H. S. Torres, Leizer Schnitman, J.A.M. Felipe de Souza* (Portugal)

13:00:14:00 – Lunch

Session 3 (Invited): Enabling collaborative Innovation processes along the product life cycle

14:00 - 16:00 - room1

Chair: Markus Seifert (Germany)

Guidance for the Knowledge Intensive Early-Stage of Product Development

Alexander Hesmer* (FGermany)

Innovation in Manufacturing: What Next?

Heiko Duin* (Germany)

Tuning in to organizational innovation – music as a metaphor to understand the improvisational field in organizations

Christopher Dell, Wolfgang Stark* (Germany)

Evaluating the Melodie ICT Tool for Supporting Idea Generation

Johann Riedel* (Germany)

Session 4: Production Control 2

14:00 - 16:00 - room2

Chair: *Evgeny Gurevsky* (France)

Flexible Internal Logistics based on AGV systems: A case Study

*Luis André Freitas Rocha**, *António Paulo Moreira*, *Americo Azevedo* (Portugal)

An Efficient and User-Friendly Optimization Framework for Batch Process Scheduling

*Thomas Tometzki**, *Tobias Claus Neymann*, *Jochen Steimel*, *Subanatarajan Subbiah*, *Sebastian Engell* (Germany)

A new formulation for a variant of the Capacitated Lot Sizing and Scheduling Problem with Sequence Dependent setup costs and times: Single machine, multiple products and periods

*Imen CHAIEB MEMMI**, *Sondes Hammami Laaroussi* (Tunisia)

Post-optimal analysis of one transfer line balancing problem

*Evgeny Gurevsky**, *Olga Guschinskaya*, *Alexandre Dolgui* (France)

16:00:16:30 – Coffee Break

Session 5 (Invited): Teaching and Curricula Development in Production Management and Control

16:30 - 17:40 room 1

Chair: *David O'Sullivan* (Ireland)

Integrating experimental learning into Industrial Engineering curricula – a case study

*Ralph Riedel** (Germany)

Teaching Production Planning and Control to Informatics Engineering Students

*Antonio Dourado** (Portugal)

Curriculum Development in Manufacturing Systems and Supply Chains

*David O'Sullivan** (Ireland)

Session 6 : Supply Chain Integration and Management 1

16:30 - 17:40 – room

Chair: Grzegorz Filcek* (Poland)

Comparison of inventory periodic policies applied within the framework of VMI approach

sondes hammami laaroussi, Imen CHAIEB MEMMI (Tunisia)*

Modeling a Supply Chain as a Queuing System

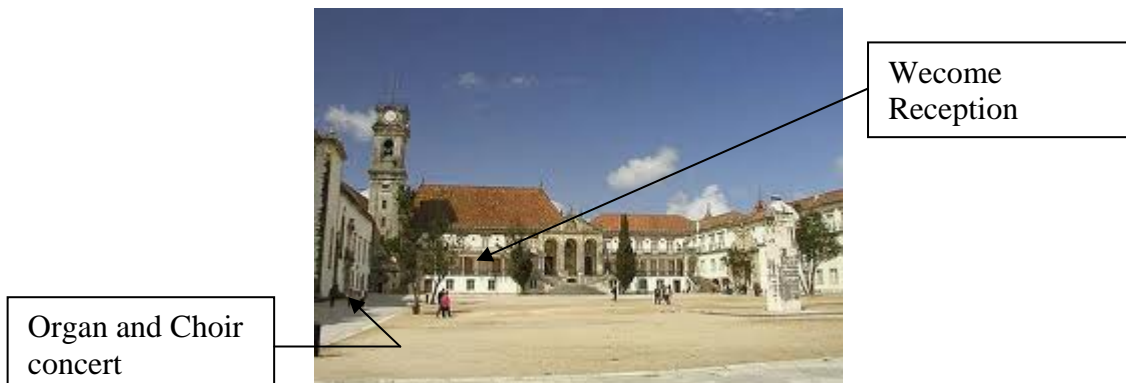
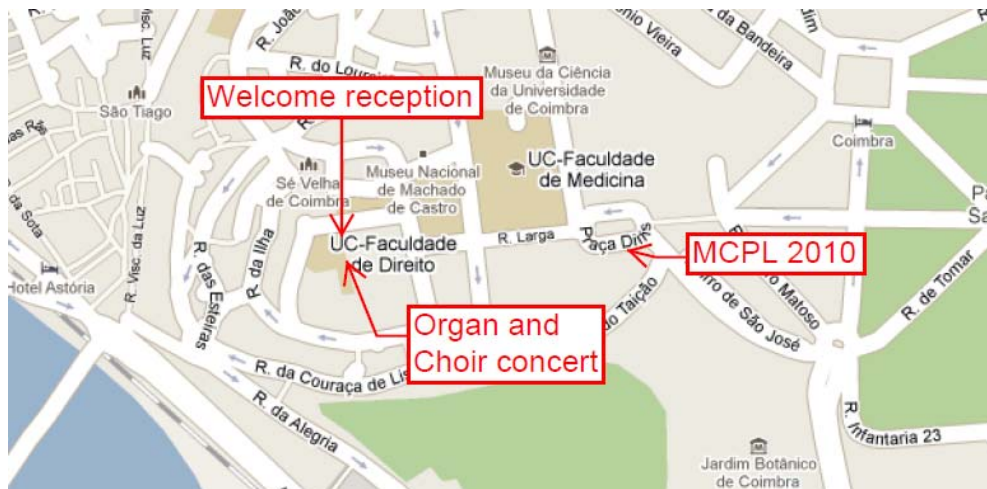
Peral Toktas Palut, Fusun Ulengin (Turkey)*

Managing Production and Transportation in a Class of Non-Balanced Supply Networks

Grzegorz Filcek (Poland)*

18:00 – Organ and choir concert: Chapel S.Miguel, Páteo da Universidade

19:00 Welcome reception: Faculty of Law, Páteo da Universidade



09 September 2010

Plenary Session 2

09:00 - 10:00 - Anf1

Towards a factory of things - technologies for the factory of the future

Detlef Zühlke

German Research Center for Artificial Intelligence DFKI
Innovative Factory Systems, Kaiserslautern, Germany

Chair: Luís Camarinha-Matos (Portugal)

10:00 - 10:30 – Coffee Break

Session 7 (invited): Process Control

10:30- 12:30 - room1

Chair: Florin George Filip (Romania)

Hierarchical control for ethylene production in petrochemical installations

Elena Margareta Cimpoesu, Madalina Mircioiu, Ciprian Lupu, Catalin Petrescu (Romania)*

Robust model based control method for wind energy production

Andreea Pinteaa, Ioana Pisica (Romania)*

Open Loop versus Closed Loop Identification and Control of an Active Suspension

Dan STEFANOIU, Mihai CORNOIU, Ioan Dore Landau (Romania)*

Modeling, control and robustness analysis for a road sector

Catalin Dimon, Geneviève Dauphin-Tanguy, Dumitru Popescu (Romania)*

Advanced control and optimization for thermo-energetic installations

Tudor Bogdan Airimitoai, Dumitru Popescu, Florin Gheorghe Filip (Romania)*

Session 8: Manufacturing Production 1

10:30 - 12:30 – room2

Chair: Alexandra Tenera (Portugal)

Supporting framework to improve Engineer-To-Order product lead-times

Aïcha Amrani-Zouggar*, Salah Zouggar, marc Zolghadri, Philippe Girard (France)

A Method to Optimize the Overall Equipment Effectiveness

Marin Mainea, Luminita Duta*, Paul Ciprian PATIC, Ion Caciula (Romania)

A multi-criteria approach for a tasks allocation problem with consideration of equity between operators

Imen CHAIEB MEMMI*, besma abbassi (Tunisia)

Improving setup time in a Press Line – Application of the SMED methodology

Andreia Cristiana Simões, Alexandra Tenera* (Portugal)

12:30 - 14:00 – Lunch

Plenary Session 3

14:00 - 14:45 - Anf1

Chair: Jean-Claude Hennet (France)

From product driven to market driven system: the implementations of BPS (Bosch Production System) in the factory of Casia in Portugal, experiences and lessons

Paulo Vieira e Filipe Santos, Industrial Engineers, Bosch Thermotechnologies (Vulcano), Aveiro, Portugal

Session 9 : Optimization Methods and Simulation Tools 2

15:00 - 16:30 - room1

Chair: Yiannis Papadopoulos (United Kingdom)

Towards an experimental simulation platform for the optimisation of a production cell

Baptiste Arnault, Thierry SORIANO* (France)

Comparing the performance of genetic operators for the vehicle routing problem

mais HAJ RACHID, WAHIBA RAMDANE CHERIF*, Pascal Chatonnay, christelle bloch (France)

Dynamic Effect of Perfect Preventive Maintenance on System Reliability and Cost Using HiP-HOPS

Shawulu Hunira Nggada*, David James Parker, Yiannis Papadopoulos (United Kingdom)

Session 10 (Invited): Wireless Sensor Networks Applications

15:00 - 16:30 – room2

Chair: Anja Klein (Germany)

The GINSENG Middleware for Performance Control in Sensor Networks

Anja Klein* (Germany)

Multi-Agent Platform in WSN Applications: A Time Synchronization Perspective

Amâncio Santos* (Portugal)

A Wireless Sensor Network Platform for Structural Health Monitoring: enabling accurate and synchronized measurements through COTS+custom-based design

R. Severino* (Portugal)

A Framework for Integrating WSNs and External Environments

Thanh-Dien Tran* (Portugal)

Session 11: Intelligent and Distributed Systems

15:00-16:30 Room 3

Chair: Alina Tarau (Netherlands)

Heterogeneous Processors Scheduling Problems using MAX-MIN Ant System & Crossover Procedure

Pierre Borne*, Ali Diouani (France)

The Future of Knowledge in Manufacturing Systems in the Future Era of Internet of Things

Mihnea Alexandru Moisescu*, Ioan Dumitrache, Simona Iuliana Caramihai, Aurelian M. Stanescu, Ioan Stefan Sacala (Romania)

A Service Oriented Platform for Context Aware Knowledge Enhancing

*kening**, Savas Ziplies, Sebastian Scholze, Maria Marques, Ana Rita Campos, Rui Neves-Silva, David O'Sullivan (Ireland)

16:30 - 17:00 – Coffee Break

Session: Industry Panel

17:00 - 18:00 - Anf1

Chair: José Maria Ataíde, Portucel-Soporcel (Portugal)

The challenges of the coming future : Supervision and systems integration in industrial scenarios

Participants from:

Brisa (Highways),

Bosch (Thermotechnologies)

Galp, Oil and Refineries

Portucel Soporcel (Pulp and Paper),

SAP (Software),

Plux (Electronics)

DEI-UC (Academics)

20:00 Conference Dinner: Giuseppe & Joaquim Restaurant, Rua da Sota.



Phone 239 098 990

10 September 2010

Session 12 (Invited): Balancing costs and performances in manufacturing systems

10:00- 12:00 - room1

Chair: Octavian Bologa (Romania)

Improving the Manufacturing Accuracy of the Profiling Machines

Biris Cristina (Romania)*

Low-cost solutions for manipulation tasks in manufacturing systems: balancing costs and performances

Octavian Bologa (Romania)*

Web engineering and multi-criterion analysis of modeling languages used in production systems

Marius Cioca, Luminita Duta, L.Cioca (Romania)*

Aspects of Improving the Cost-Performance Ratio for the Manufacturing of Small-Size Cast Parts

Cristian Deac (Romania)*

10:30:12:30 - room1

Modular device for determining forming limit curves – a cost effective approach

Octavian Bologa (Romania)*

Session 13: Production Control 3

10:00- 12:00 – room2

Chair: Dejan Gradisar (Slovenia)

Passive Robustness in Milk Manufacturing Unit with Time Constraints

Anis M'Halla (France), Simon Collart Dutilleul (France)*

Supervisory Control of partially observable Marked Graph based on Marking Exclusion Constraint

Maen ATLI, Zied ACHOUR, Alexandre Sava, Nidhal REZG (France)*

A Profit Optimization Decision Support Tool for the Offshore Aquaculture Industry

Michalis Menicou, Marios Charalambides, Vassos Vassiliou (Cyprus)*

Modelling case study for holistic production control

Dejan Gradisar*, Miha Glavan, Jus Kocijan, Stanko Strmcnik (Slovenia)

12:00 - 14:00 – Lunch

Session 14 (Invited): Planning, Scheduling and Performance Evaluation in Industrial Environments

14:00- 16:00 – room1

Chair: Carlos Passos (Brazil)

Aggregate Production Planning: Modeling and Solution via Excel Spreadsheet and Solver.

Oscar Salviano Silva Filho*, Wagner Cezarino (Brazil)

Supply network formation as a biform game

Jean-Claude Hennet*, Sonia Mahjoub (France)

A Methodology for Supply Chain Design An Application to Auto-part Industry

Marcus Fabius Carvalho* (Brazil)

Virtual Factory Framework: An Innovative Approach To Support The Planning And Optimization Of The Next Generation Factories

AMÉRICO AZEVEDO*, ROBERTO DA PIEDADE FRANCISCO, JOÃO BASTOS, ANTÓNIO ALMEIDA

A multi-agent approach to solve job shop scheduling problems using metaheuristics

Carlos Alberto dos Santos Passos*, Vitor Massaru Iha, Rafael Baboni Dominiquini (Brazil)

Session 15: Production Control 4

14:00- 16:00 – room2

Chair: Carlos Alberto Costa (Italy)

A Real-Time Quality Assurance Tool for the Cyprus Construction Industry

Michalis Menicou*, Vassos Vassiliou, Petros Christou, Marios Charalambides (Cyprus)

Update Procedure for the Supervisory Control of P-Time Event Graphs

Patrice Bonhomme* (France)

Influence of fixed-deadline orders on memetic algorithm performance in production planning

Gregor Papa*, Peter Korosec, Vida Vukasinovic (Slovenia)

Organizational Processes Alignment and Company Strategy within a process management approach: an Assessment Tool

Carlos Alberto Costa*, Marilza Acordi Costa, Jana Toledo de Castilhos, Beatriz L.S. Bizotto, Giovani Zappas (Italy)

16:00 - 16:30 – Coffee Break

Session 16 (Invited): OR Applications in Industry

16:30-18:30 - room1

Chair : Valério de Carvalho (Portugal)

Solving a Multiprocessor Problem by Column Generation and Branch-and-price

António Duarte*, José Manuel Valério de Carvalho (Portugal)

Sequencing Cutting Patterns with Colored Interval Graphs

Isabel Cristina Lopes*, José Manuel Valério de Carvalho (Portugal)

A Fast Heuristic for a Lot Splitting and Scheduling Problem of a Textile Industry

Carina Pimentel*, Filipe Alvelos, José Manuel Valério de Carvalho, António Duarte (Portugal)

Exploring New Constructive Algorithms for the Leather Nesting Problem in the Automotive Industry

Pedro Brás, Cláudio Alves*, José Manuel Valério de Carvalho, Telmo Pinto (Portugal)

Session 17: Hierarchical, Distributed Networks

16:30: 18:30 – room2

Chair: Miguel Antonio Mujica Mota (Spain)

Predictive Control for Baggage Handling Systems using Mixed Integer Linear Programming

Alina Tarau*, Bart De Schutter, Hans Hellendoorn (Netherlands)

Scheduling supply chain node with fixed components arrivals and two partially flexible deliveries

Susana Carrera*, WAHIBA RAMDANE CHERIF, Marie-Claude Portmann (France)

The Modeling Methodology of Fuzzy Cognitive Maps for Complex Logistics Systems

Chrysostomos Stylios* (Greece)

Time Line Search for the State Space-based Optimization Algorithm for Timed Coloured Petri Nets

Miquel Antonio Mujica Mota, Miquel Angel Piera Eroles (Spain)*

18:30 – Closing