



## GENERAL SCHEDULE

<b>Monday 25</b>	19:00–20:00	Registration and Welcome Cocktail
<b>Tuesday 26</b>	8:30	Opening session
	9:00 –10:20	Regular sessions
	10:20–10:40	Coffee break
	10:40–12:30	Regular sessions
	12:30–14:00	Lunch
	14:00–15:50	Regular sessions
	15:50–16:10	Coffee break
	16:10–18:00	Regular sessions
	19:00	Departure (Fish restaurant – optional)
<b>Wednesday 27</b>	9:00–10:20	Regular sessions
	10:20–10:40	Coffee break
	10:40–12:30	Regular sessions
	13:00	Departure (Ephesus excursion)
<b>Thursday 28</b>	9:00 –10:20	Regular sessions
	10:20–10:40	Coffee break
	10:40–12:30	Regular sessions
	12:30–14:00	Lunch
	14:00–15:50	Regular sessions
	15:50–16:10	Coffee break
	16:10–18:00	Regular sessions
	19:30	Gala dinner at Sheraton
<b>Friday 29</b>	9:00 –10:20	Regular sessions
	10:20–10:40	Coffee break
	10:40–12:30	Regular sessions
	12:30–14:00	Lunch
	14:00–15:00	Regular sessions

# ODYSSEUS 2009 SESSION SCHEDULE

## May 26–29 2009, Tuesday–Friday

<b>Tu 26</b>	9:00–10:20	Capacitated Vehicle Routing	Humanitarian Logistics	Terminal Management
	10:40–12:30	Rich Vehicle Routing	Disaster Response	Facility Location
	14:00–15:50	Vehicle Routing	Hazardous Materials Logistics	Supply Chain Logistics
	16:10–18:00	Time-Constrained Vehicle Routing	Freight Transportation	Supply Chain Logistics
<b>We 27</b>	9:00–10:20	Vehicle Routing	Air Transportation	Applications
	10:40–12:30	Traveling Salesman Problem	Maritime Transportation	Applications
<b>Th 28</b>	9:00–10:20	Distribution	Network Design	Metaheuristics
	10:40–12:30	Distribution	City Logistics	Scheduling
	14:00–15:50	Routing problems	City Logistics	Routing and Scheduling
	16:10–18:00	Inventory Routing	Freight Transportation	Transportation and Routing
<b>Fr 29</b>	9:00–10:20	Networks	Dynamic Decision Making	Operations Planning
	10:40–12:30	Inventory Routing	Passenger Transportation	Logistics System Design
	14:00–15:00	Split Delivery Vehicle Routing Problem	Berth Allocation	Optimization Methods

## ODYSSEUS 2009 SESSION CHAIRS

May 26–29 2009, Tuesday–Friday

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<b>Tu 26</b>	9:00–10:20	<i>Juan Jose Salazar González</i>	<i>Jose Holguin-Veras</i>	<i>Alan Erera</i>
	10:40–12:30	<i>Michel Gendreau</i>	<i>Pinar Keskinocak</i>	<i>Necati Aras</i>
	14:00–15:50	<i>Guy Desaulniers</i>	<i>Vedat Verter</i>	<i>Frederic Semet</i>
	16:10–18:00	<i>Gilbert Laporte</i>	<i>Ali Haghani</i>	<i>Stefan Nickel</i>
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<b>We 27</b>	9:00–10:20	<i>Luce Brotcorne</i>	<i>Cynthia Barnhart</i>	<i>Deniz Aksen</i>
	10:40–12:30	<i>Maria Grazia Speranza</i>	<i>Henrik Andersson</i>	<i>Sibel Salman</i>
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<b>Th 28</b>	9:00–10:20	<i>Geir Hasle</i>	<i>Deniz Özdemir</i>	<i>Teodor Gabriel Crainic</i>
	10:40–12:30	<i>Haldun Süral</i>	<i>Eiichi Taniguchi</i>	<i>Daniele Vigo</i>
	14:00–15:50	<i>Burçin Bozkaya</i>	<i>Jaume Barcelo</i>	<i>Jacques Desrosiers</i>
	16:10–18:00	<i>Pitu Mirchandani</i>	<i>Dimitrios Emiris</i>	<i>Nicola Bianchessi</i>
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<b>Fr 29</b>	9:00–10:20	<i>Bahar Kara</i>	<i>Angelica Lozano</i>	<i>Güvenç Şahin</i>
	10:40–12:30	<i>Oli B.G. Madsen</i>	<i>Fusun Ülengin</i>	<i>María Angélica Salazar-Aguilar</i>
	14:00–15:00	<i>Richard Wong</i>	<i>Ilaria Vacca</i>	<i>Angel Corberán</i>

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# ODYSSEUS 2009 DETAILED PROGRAM

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## Tuesday, 9:00–10:20

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### Tu.1.a : Capacitated Vehicle Routing

*Chair: Juan Jose Salazar González*

SimuRoute: using simulation to provide alternative solutions to the capacitated vehicle routing problem

*Javier Faulin, Angel A Juan, Rubén Ruiz, Barry Barrios, Miquel Gilibert, Xavier Vilajosana*

Using disjunctive cuts in a branch-and-cut-and-price algorithm for the capacitated vehicle routing problem

*Stefan Ropke*

On the vehicle routing problem with lower bound capacities

*Juan Jose Salazar González, Luis Gouveia, Jorge Riera Ledesma*

### Tu.1.b : Humanitarian Logistics

*Chair: Jose Holguin-Veras*

Design of a mobile blood collection system for Turkish Red Crescent (TRC)

*Bahar Y. Kara, Deniz Başoğlu, Mehmet R. Taner, Görkem Yurtlu*

A bilevel  $p$ -median problem for the planning and protection of critical infrastructure

*Necati Aras, Nuray Piyade, Deniz Aksen*

On the need to reformulate humanitarian logistics to explicitly consider social costs

*Jose Holguin-Veras, Noel Perez, Miguel Jaller*

### Tu.1.c : Terminal Management

*Chair: Alan Erera*

A local search extended heuristic for stowing under deck locations of container vessels

*Dario Pacino, Rune Møller Jensen*

An integrated planning methodology for seaside operations in container terminals

*Frank Meisel, Christian Bierwirth*

Real-time container storage location assignment at a seaport container transshipment terminal

*Matthew Erich Harold Petering, Katta Murty*

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## **Tuesday, 10:40–12:30**

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### **Tu.2.a : Rich Vehicle Routing**

**Chair:** *Michel Gendreau*

Large neighborhood search for a rich dynamic VRP with transshipments, backhauls and subcontracting

*Andrea M. Nagel, Giselher Pankratz, Hermann Gehring*

A new mixed integer linear model for a class of rich vehicle routing problems

*Julia Rieck, Juergen Zimmermann*

Multi-thread cooperative optimization for rich VRP

*Nadia Lahrichi, Gloria Cerasela Crisan, Teodor Gabriel Crainic, Walter Rei, Michel Gendreau, Louis-Martin Rousseau*

A metaheuristics framework for solving rich routing problems

*Jens Wollenweber, Thomas Sigl*

### **Tu.2.b : Disaster Response**

**Chair:** *Pinar Keskinocak*

A strategic planning framework to enhance infrastructure network survivability and functionality under disasters

*Srinivas Peeta, F. Sibel Salman, Lili Du*

Supply chain management in disaster response

*Ali Haghani, Abbas Mohassel-Afshar*

Post-disaster casualty logistics planning: the İstanbul case

*Sezer Gül, Sibel Salman*

Debris management operations

*Özlem Ergun, Antonio Carbajal, Abhishek Siddhanthi, Monica Villarreal, Pinar Keskinocak*

## **Tu.2.c : Facility Location**

**Chair:** *Necati Aras*

Capacitated facility location with random handling costs

*Roberto Tadei, Nicoletta Ricciardi, Guido Perboli*

Lower and upper bounds for a capacitated plant location problem with multicommodity flow

*Jinfeng Li, Feng Chu, Christian Prins*

The capacitated plant location problem with customers and suppliers matching

*Zhanguo Zhu, Feng Chu, Linyan Sun*

Coverage models with time dependent traveling times

*Verena Schmid, Karl F Doerner*

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## **Tuesday, 14:00–15:50**

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## **Tu.3.a : Vehicle Routing**

**Chair:** *Guy Desaulniers*

A branch-and-price algorithm for the multi-depot fleet size and mix vehicle routing problem with time windows

*Giovanni Righini, Andrea Bettinelli, Alberto Ceselli*

Disrupted capacitated vehicle routing problem with vehicle breakdown

*Qianxin Mu, Zhuo Fu, Richard Eglese*

Models and algorithms for vehicle routing problems considering EU social legislation on drivers' working hours

*Jens Wollenweber, Eric Prescott-Gagnon, Michael Drexler, Guy Desaulniers,  
Louis-Martin Rousseau*

Enhanced branch-price-and-cut for vehicle routing with split deliveries and time windows

*Guy Desaulniers, Claudia Archetti*

## **Tu.3.b : Hazardous Materials Logistics**

**Chair:** *Vedat Verter*

Comparison between urban linehaul and physical distribution of HazMats: cases study in Mexico City

*Angélica Lozano, Ángeles Muñoz, Francisco Granados, Luis Macías, Juan Pablo Antún*

Regulating HazMat transportation: a game theory approach

*Lucio Bianco, Massimiliano Caramia, Stefano Giordani, Veronica Piccialli*

Hazardous waste logistics: strategic and tactical decisions

*Rodrigo A Garrido*

Railroad transportation of hazardous materials: a risk-cost approach

*Manish Verma, Vedat Verter, Michel Gendreau*

### **Tu.3.c : Supply Chain Logistics**

**Chair: Frederic Semet**

Optimization and coordination of transportation decisions in a multi-industry manufacturing supply chain

*Süleyman Karabük*

Multi-period supply-chain network equilibrium problem with capacity constraints and purchasing strategies

*Younes Hamdouch, Siriphong Lawphongpanich*

The purchaser problem with volume discounts and direct connections

*Renata Mansini, Martin Savelsbergh, Barbara Tocchella*

A column generation based heuristic for the capacitated location-routing problem

*Frederic Semet, Celia Boulanger*

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## **Tuesday, 16:10–18:00**

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### **Tu.4.a : Time-Constrained Vehicle Routing**

**Chair: Gilbert Laporte**

A route improvement algorithm for the vehicle routing problem with time dependent travel times and time window constraints

*Miguel Andres Figliozzi*

A powerful memetic algorithm for time-constrained vehicle routing problems

*Yuichi Nagata, Wout Dullaert, Olli Bräysy*

Multi-trip vehicle routing problem with time windows for agricultural tasks

*Florent Hernandez, Dominique Feillet, Rodolphe Giroudeau, Oliver Naud*

An ant colony system for the orienteering problem with time windows

*Roberto Montemanni, Luca Maria Gambardella*

## **Tu.4.b : Freight Transportation**

**Chair: Ali Haghani**

Scheduling and routing of airborne sensors to monitor HazMat trucks

*Pitu B Mirchandani, Monica Gentili*

A single step multi-objective optimization of hazardous material transportation

*Rojee Pradhananga, Eiichi Taniguchi, Tadashi Yamada*

Dynamic decision making for LTL trucking operations

*Ali Haghani, Behrang Hejazi*

## **Tu.4.c : Supply Chain Logistics**

**Chair: Stefan Nickel**

Analysis of supply chain contracts using distributed decision making

*Emel Aktaş, Füsün Ülengin*

Modeling shipment consolidation and pricing decisions for a private carrier

*Muhammed Ali Ülkü, James H. Bookbinder*

Current trends in supply chain literature

*Özgür Kabak, Füsün Ülengin*

A heuristic approach for a multi-period supply chain redesign problem

*Teresa Melo, Stefan Nickel, Francisco Saldanha Da Gama*

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## **Wednesday, 9:00–10:20**

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### **We.1.a : Vehicle Routing**

**Chair: Luce Brotcorne**

Stability in waste collection problem: a case study

*Frédérique Baniël, Marie-José Huguet, Thierry Vidal*

A heuristic algorithm for the waste collection vehicle routing problem with time windows

*Aida Mauziah Benjamin, John E Beasley*



Algorithms for the multi-period orienteering problem with multiple time windows

*Fabien Tricoire, Martin Romauch, Karl F Doerner, Richard F Hartl*

## **We.1.b : Air Transportation**

**Chair: Cynthia Barnhart**

A combinatorial auction scheme for air traffic management

*Andrea Ranieri, Lorenzo Castelli*

Managing exclusive use airport check-in counter system with parallel queues

*Moosa Sharafali, Mahmut Parlar, Brian Rodrigues*

Demand management and capacity allocation in the US National Air Transportation System

*Cynthia Barnhart, Doug Fearing, Vikrant Vaze*

## **We.1.c : Applications**

**Chair: Deniz Aksen**

Measuring CO<sub>2</sub> emissions at container terminals: a new approach applied in Rotterdam

*Ron Van Duin, Harry Geerlings*

A decision support system for the open vehicle routing problem

*Deniz Koşucuoğlu, Selçuk Savaş, Deniz Aksen*

Logistics service customers in Turkey: a comparative survey

*Emel Aktaş, Füsun Ülengin, Berrin Agaran, Şule Önsel*

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## **Wednesday, 10:40–12:30**

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## **We.2.a : Traveling Salesman Problem**

**Chair: Maria Grazia Speranza**

The traveling salesman problem with pickups, deliveries and handling costs

*Maria Battarra, Güneş Erdoğan, Gilbert Laporte, Daniele Vigo*

Exact solutions to the double TSP with multiple stacks

*Hanne L Petersen, Claudia Archetti, Oli B.G. Madsen, Maria Grazia Speranza*

Anticipatory insertion and sample-scenario planning for the dynamic traveling salesman problem

*Barrett W. Thomas, Gianpaolo Ghiani, Emanuele Manni*

An effective heuristic for the pickup and delivery traveling salesman problem with LIFO loading and multiple stacks

*Michel Gendreau, Jean-François Côté, Jean-Yves Potvin*

## **We.2.b : Maritime Transportation**

**Chair: Henrik Andersson**

A rolling horizon heuristic for a large scale liquefied natural gas inventory routing problem

*Jørgen Glomvik Rakke, Magnus Stålhane, Christian Rørholt Moe, Marielle Christiansen, Kjetil Fagerholt, Henrik Andersson*

Decomposition of routing and scheduling decisions in a maritime transportation problem with berth and inventory constraints

*Elin E Halvorsen-Weare, Kjetil Fagerholt*

The maritime split pickup split delivery problem – alternative solution approaches and results

*Frank Hennig, Bjorn Nygreen*

A maritime pickup and delivery problem with time windows and split loads

*Henrik Andersson, Marielle Christiansen, Kjetil Fagerholt*

## **We.2.c : Applications**

**Chair: Sibel Salman**

Simulation-based layout analyze of a Turkish container terminal

*Osman Kulak, Olcay Polat, Hans Otto Guenther*

Regional transportation network assessment for Asia-Europe-Africa

*Hossein Dashtestaninejad, Manouchehr Vaziri*

The potential for intermodal transport in Turkey: a GIS-based analysis for the intermodal rail terminals

*Ethem Pekin, Cathy Macharis*

Using RFID technology for real-time logistics management of dried figs: insights from a greek union of cooperatives

*Vasileios S. Zeimpekis, Ioannis Minis*

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## Thursday, 9:00–10:20

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### Th.1.a : Distribution

**Chair:** *Geir Hasle*

Variable neighborhood heuristic methods for a multi-echelon capacitated location-distribution problem

*Bernard Gendron, Paul-Virak Khuong, Frédéric Semet*

A branch and bound for the two-echelon vehicle routing problem

*Simona Mancini, Guido Perboli, Roberto Tadei, Teodor Gabriel Crainic*

Solving mixed general routing problems in distribution of media products

*Geir Hasle, Oddvar Kloster, Eivind Jodaa Nilssen, Morten Smedsrud*

### Th.1.b : Network Design

**Chair:** *Deniz Özdemir*

Improved load plan design through integer programming based local search

*Alan Erera, Martin Savelsbergh, Michael Hewitt, Yang Zhang*

Refined execution cost estimation for LTL load plans

*Alan Erera, Martin Savelsbergh, Michael Hewitt, Yang Zhang*

Bi-objective supply chain design problem with uncertainty in demands

*Yajaira Cardona, Ada Álvarez, Deniz Özdemir*

### Th 1.c : Metaheuristics

**Chair:** *Teodor Gabriel Crainic*

Routing a heterogeneous fleet of vehicles for the delivery of multiple products

*Panagiotis P Repoussis, Christos D Tarantilis*

Metaheuristics for a real world waste collection problem

*Vera C. Hemmelmayr, Karl F. Doerner, Richard F. Hartl*

An evolutionary algorithm for the periodic location-routing problem

*Caroline Prodhon*

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## Thursday, 10:40–12:30

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### Th.2.a : Distribution

**Chair: Haldun Süral**

A new solution approach for multiple container loading problem

*Aydın Sipahioğlu, Gökhan Kırılık, Tuğba Saraç*

Production inventory distribution routing problem – a heuristic approach

*Berkay Beygo, Mahmut Ali Gökçe, Özgür Akgün, Onur Raşit Coşkunseda*

A multi-objective branch-and-cut algorithm for the multi-modal traveling salesman problem

*Nicolas Jozefowicz, Gilbert Laporte, Frédéric Semet*

The order-picking problem in a rectangular warehouse

*Melih Çelik, Haldun Süral*

### Th.2.b : City Logistics

**Chair: Eiichi Taniguchi**

Evaluating two-echelon city logistics systems

*Teodor Gabriel Crainic, Fausto Errico Nicoletta Ricciardi, Walter Rei*

Integrating intra-city movements into two-tier city logistics planning

*Teodor Gabriel Crainic, Fausto Errico Nicoletta Ricciardi, Walter Rei*

A column generation based approach for vehicle routing problem with semi soft time windows

*Ali Gul Qureshi, Eiichi Taniguchi, Tadashi Yamada*

Evaluating emission reductions and trade-offs in urban pickup and delivery systems

*Felipe A Sandoval, Anne V Goodchild*

### Th.2.c : Scheduling

**Chair: Daniele Vigo**

Routing and scheduling and fleet management for liner shipping

*Karina Hjortshøj Kjeldsen*

Shift scheduling in the same-day courier industry

*Emanuele Manni, Gianpaolo Ghiani, Antonella Quaranta*

Tramp ship routing and scheduling with speed optimization

*Inge Norstad, Kjetil Fagerholt, Gilbert Laporte*

Scheduling of drivers' working hours under EC regulation 561/2006

*Asvin Goel*

## Thursday, 14:00–15:50

### Th.3.a : Routing problems

**Chair:** *Burçin Bozkaya*

A branch and cut method for location routing problem with simultaneous backhauls

*İsmail Karaoğlan, Fulya Altıparmak, İmdat Kara, Berna Dengiz*

Allocating costs in inventory routing problem

*Okan Örsan Özener, Özlem Ergun, Martin Savelsbergh*

A location and routing-with-profit problem in glass recycling

*Canan Sepil, Esra Polat*

A multi-source vehicle routing model for delivering e-grocery

*Burçin Bozkaya, Ronan De Kervenoael*

### Th.3.b : City Logistics

**Chair:** *Jaume Barcelo*

How can automated transportation system be considered in urban freight transport?

*Loïc Delaitre, Michel Parent, Yoram Zvirin, Jose Prades*

Evaluating city logistics measures using multi-agent models

*Dai Tamagawa, Eiichi Taniguchi, Tadashi Yamada*

Estimating traffic flows and environmental effects of urban commercial supply in global city logistics decision support

*Jesus Gonzalez-Feliu, Frédéric Henriot, Jean-Louis Routhier*

Real-time traffic information and time-dependent travel times in a simulation based decision support system for city logistics applications

*Jaume Barcelo, Jesús Arturo Orozco, Hanna Grzybowska*

### **Th.3.c : Routing and Scheduling**

**Chair:** *Jacques Desrosiers*

Optimization and simulation to reduce congestion at locks in a river transportation system

*L Douglas Smith, Matthias Reindl, Jan Fabian Ehmke, Dirk Christian Mattfeld*

Vehicle routing and container scheduling in timber transport

*Jan Zazgornik, Manfred Gronalt, Patrick Hirsch*

Designing routes to match collected workload with the processing capacity

*Aytekin Gel, Esma Gel, Lerzan Örmeci, Sibel Salman, Eda Yücel*

Arc elimination in routing and scheduling applications

*Jacques Desrosiers, Stefan Irnich, Guy Desaulniers, Ahmed Hadjar*

## **Thursday, 16:10–18:00**

### **Th.4.a : Inventory Routing**

**Chair:** *Pitu Mirchandani*

Modeling and solving a real world maritime inventory routing problem

*Truls Flatberg, Oddvar Kloster*

Cyclic inventory routing under demand uncertainty

*Birger Raa, Wout Dullaert*

A hybrid algorithm for an inventory-routing problem

*Maria Grazia Speranza, Claudia Archetti, Alain Hertz, Luca Bertazzi*

Analysis of practical policies for the inventory-routing problem with minimum intershipment

*Luca Bertazzi, Lap Mui Ann Chan, Maria Grazia Speranza*

### **Th.4.b : Freight Transportation**

**Chair:** *Dimitrios Emiris*

A dynamic model of integrated production-transportation operations

*Ning Xu, Jose Holguin-Veras*

US freight flow analysis under extreme conditions: I40-bridge collapse

*Pakize Simin Pulat, Quoqiang Shen, Saniye Gizem Aydın*

Procurement of transportation services using electronic auctions and the process of choosing the optimal offers

*Theodore Anagnostou, Charis Marentakis, Dimitrios Emiris*

Simplification of multi-attribute auctions in the freight procurement domain through the incorporation of LBS technology

*Charis Marentakis, Dimitrios Emiris*

#### **Th.4.c : Transportation and Routing**

**Chair: Nicola Bianchessi**

A dynamic single freight carrier collaboration problem with holding costs

*Salvador Hernandez, Srinivas Peeta*

A novel template for the hosting of auctions conducted in the freight services marketplace

*Dimitrios Emiris, Charis Marentakis*

A revenue management approach for container rail transportation

*Ioana C. Bilegan, Luce Brotcorne, Dominique Feillet, Yezekael Hayel*

An exact approach for the split delivery vehicle routing problem

*Nicola Bianchessi, Claudia Archetti, Maria Grazia Speranza*

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### **Friday, 9:00–10:20**

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#### **Fr.1.a : Networks**

**Chair: Bahar Y. Kara**

Designing hub networks with connected and isolated hubs

*James F Campbell*

A node-based approach for the continuous dynamic network loading problem

*Hilmi Berk Çelikoğlu, Ergun Gedizlioğlu, Mauro Dellorco*

The design of single allocation incomplete hub networks

*Sibel Alumur, Bahar Y. Kara, Oya E. Karasan*

## Fr.1.b : Dynamic Decision Making

**Chair:** *Angelica Lozano*

Approximate dynamic programming for dynamic routing of a vehicle with request confirmations

*Stephan Meisel, Uli Suppa, Dirk C Mattfeld*

The dynamic traveling purchaser problem

*Enrico Angelelli, Renata Mansini, Michele Vindigni*

Real time dynamic shortest path problem solution algorithm using wavelets

*Ali Haghani, Kaveh Farokhi Sadabadi*

## Fr.1.c : Operations Planning

**Chair:** *Güvenç Şahin*

A simulation model for the fleet sizing problem arising in offshore anchor handling operations

*Aliaksandr Shyshou, Irina Gribkovskaia, Jaume Barceló*

The distribution center operation planning using the tabu and the decomposed optimization

*Young Hoon Lee, Soon Geol Kwon*

Incorporating operational complexity in the period vehicle routing problem

*Maciek Nowak, Karen Smilowitz, Tingting Jiang*

## Friday, 10:40–12:30

## Fr.2.a : Inventory Routing

**Chair:** *Oli B.G. Madsen*

Some special constraint considerations for a livestock transportation planner

*Arne Løkketangen, Johan Oppen*

A construction and improvement heuristic for a large scale liquefied natural gas inventory routing problem

*Magnus Stålhane, Jørgen Glomvik Rakke, Christian Rørholt Moe, Marielle Christiansen, Kjetil Magnus Stålhane*

Improving construction heuristics for inventory routing problems

*Arild Hoff, Arne Løkketangen*



Optimization of an integrated production distribution system

*Claudia Archetti, Luca Bertazzi, Giuseppe Paletta, Maria Grazia Speranza*

## **Fr.2.b : Passenger Transportation**

**Chair: Füsün Ülengin**

Algorithms for the heterogeneous dial-a-ride problem with driver related constraints

*Sophie N Parragh, Jean-François Cordeau, Karl F Doerner, Richard F Hartl*

Public transportation algorithm for an intelligent routing system

*Ander Garcia, Oihana Otaegui, Maria Teresa Linaza, Pieter Vansteenwegen, Olatz Arbelaitz*

Design of hybrid predictive control strategies for dynamic operational processes of integrated public transport systems

*Alfredo Nuñez, Doris Saez, Cristian Eduardo Cortes*

Real-time control strategies for a public transport system based on fleet assignment operational schemes

*Doris Saez, Cristian Eduardo Cortes, Alejandra Pillajo*

Integrated control strategies of vehicle holding and boarding limits with real-time information for Bus Rapid Transit (BRT)

*Felipe Delgado, Juan Carlos Munoz, Ricardo Giesen, Aldo Cipriano*

## **Fr.2.c : Logistics System Design**

**Chair: María Angélica Salazar-Aguilar**

A simulation-based approach for a fleet design of a technician dispatch problem with stochastic demand

*Cristian Eduardo Cortes, Daniel Leng, Andres Weintraub, Michel Gendreau*

Max-dispersion territory design arising in the implementation of the WEEE directive

*Stefan Nickel, Elena Fernandez, Jörg Kalcsics*

Collection system design problem with routing

*Mehmet Tuğrul Tekin, Deniz Aksen, Necati Aras*

Bi-objective models for a commercial territory design problem

*María Angélica Salazar-Aguilar, Roger Z. Ríos-Mercado, José Luis González-Velarde*

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## Friday, 14:00–15:00

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### Fr.3.a : Split Delivery Vehicle Routing Problem

*Chair: Richard Wong*

A hybrid GRASP × Evolutionary local search for the split delivery vehicle routing problem

*Reghioui Mohamed, Prins Christian*

Vehicle routing for small package delivery and pickup services

*Richard Wong*

### Fr.3.b : Berth Allocation

*Chair: Ilaria Vacca*

Integrated berth allocation and quay crane assignment

*Wout Dullaert, Birger Raa*

Models and heuristics for the tactical berth allocation problem with quay crane assignment and transshipment costs

*Giovanni Giallombardo, Luigi Moccia, Matteo Salani, Ilaria Vacca*

### Fr.3.c : Optimization Methods

*Chair: Angel Corberán*

Solving realistic VRPs using a restricted dynamic programming framework

*Leendert Kok, Marco Schutten, Manuel Meyer, Herbert Kopfer*

New results on the windy rural postman problem with  $m$  vehicles

*Angel Corberán, Enrique Benavent, Isaac Plana, Jose Maria Sanchis*