Contents

Transport over Ground

Ant Metaheuristic with Adapted Personalities for the Vehicle Routing Problem .................................................. 3
   Nicolas Zufferey, Jaime Farres, and Rémy Glardon

The Round-Trip Ridesharing Problem with Relay Stations ................................................................. 16
   Kamel Aissat and Ammar Oulamara

A Hierarchical Model for the Cash Transfer System Design Problem .................................................. 31
   Engin Topaloglu, Abdullah Dasci, and M. Hasan Eken

A Decision Support Model for Routing and Scheduling a Fleet of Fuel Supply Vessels ........................................... 46
   Marielle Christiansen, Kjetil Fagerholt, Nikolaos P. Rachaniotis, Ingeborg Tveit, and Marte Viktoria Øverdal

An Approximate Dynamic Programming Approach to Urban Freight Distribution with Batch Arrivals .......................... 61
   Wouter van Heeswijk, Martijn Mes, and Marco Schutten

Emission Vehicle Routing Problem with Split Delivery and a Heterogeneous Vehicle Fleet ........................................ 76
   Benedikt Vornhusen and Herbert Kopfer

A Combined Liquefied Natural Gas Routing and Deteriorating Inventory Management Problem .................................. 91
   Yousef Ghiami, Tom Van Woensel, Marielle Christiansen, and Gilbert Laporte

An Ant Colony-Based Matheuristic Approach for Solving a Class of Vehicle Routing Problems .................................. 105
   Umman Mahir Yıldırım and Bülent Çatay

Transport over Water

A Hybrid Reactive Tabu Search for Liner Shipping Fleet Repositioning .................................................... 123
   Mark Becker and Kevin Tierney
Risk Analysis and Quantification of Vulnerability in Maritime Transportation Network Using AIS Data ........................................ 139
  Kiyotaka Ide, Loganathan Ponnambalam, Akira Namatame, Fu Xiuju, and Rick Siow Mong Goh

A Branch-and-Price Method for a Ship Routing and Scheduling Problem with Stowage Constraints ........................................ 152
  Magnus Stålhane

Trajectory Tracking Control for Underactuated Surface Vessels Based on Nonlinear Model Predictive Control .................... 166
  Chenguang Liu, Huarong Zheng, Rudy R. Negenborn, Xiumin Chu, and Le Wang

Cooperative Distributed Collision Avoidance Based on ADMM for Waterborne AGVs ..................................................... 181
  Huarong Zheng, Rudy R. Negenborn, and Gabriel Lodewijks

A Matheuristic for the Liner Shipping Network Design Problem with Transit Time Restrictions ............................................. 195
  Berit Dangaard Brouer, Guy Desaulniers, Christian Vad Karsten, and David Pisinger

A Positioning System Based on Monocular Vision for Model Ship .......................................................... 209
  Shuo Xie, Chenguang Liu, Xiumin Chu, and Xue Ouyang

Improvement of Navigation Conditions Using Model Predictive Control - The Cuinchy-Fontinettes Case Study .................... 222
  Klaudia Horváth, Eric Duviella, Lala Rajaoarisoa, Rudy R. Negenborn, and Karine Chuquet

A Survey on the Ship Loading Problem .................................................. 238
  Cagatay Iris and Dario Pacino

Characterization of the Portuguese SSS into the Europe: A Contribution .................................................. 252
  Teresa Pereira, José Rocha, José Telhada, and Maria Sameiro Carvalho

Yard Crane Dispatching to Minimize Total Weighted Vessel Turnaround Times in Container Terminals .......................... 267
  Shell Ying Huang and Ya Li

A Two Phase Approach for Inter-Terminal Transport of Inland Vessels Using Preference-Based and Utility-Based Coordination Rules 281
  Shijie Li, Rudy R. Negenborn, and Gabriel Lodewijks

Learning Maritime Traffic Rules Using Potential Fields .................................................. 298
  Ewa Osekowska and Bengt Carlsson
Internal Coordination within a System

Bootstrap Estimation Intervals Using Bias Corrected Accelerated Method to Forecast Air Passenger Demand ............................................. 315
  Rafael Bernardo Carmona-Benítez and Maria Rosa Nieto-Delfín

On a Pooling Problem with Fixed Network Size ............................. 328
  Dag Haugland and Eligius M.T. Hendrix

Optimizing Constraint Test Ordering for Efficient Automated Stowage Planning .................................................. 343
  Zhuo Qi Lee, Rui Fan, and Wen-Jing Hsu

Probabilistic Analysis of Online Stacking Algorithms .................. 358
  Martin Olsen and Allan Gross

Dynamic Multi-period Freight Consolidation ................................. 370
  Arturo Pérez Rivera and Martijn Mes

Synchronomodal Container Transportation: An Overview of Current Topics and Research Opportunities .............................. 386
  Bart van Riessen, Rudy R. Negenborn, and Rommert Dekker

Survey on Operational Perishables Quality Control and Logistics ........ 398
  Xiao Lin, Rudy R. Negenborn, and Gabriel Lodewijks

A Rolling Horizon Auction Mechanism and Virtual Pricing of Shipping Capacity for Urban Consolidation Centers .......................... 422
  Chen Wang, Hoong Chuin Lau, and Yun Fong Lim

Consolidation of Residual Volumes in a Parcel Service Provider’s Long-Haul Transportation Network ........................................... 437
  Martin N. Baumung and Halil I. Gündüz

A Review of Intermodal Rail Freight Bundling Operations .................. 451
  Qu Hu, Francesco Corman, and Gabriel Lodewijks

Cloud-Based Intelligent Transportation Systems Using Model Predictive Control ................................................................. 464
  Leonard Heilig, Rudy R. Negenborn, and Stefan Voß

Cooperative Relations Among Intermodal Hubs and Transport Providers at Freight Networks Using an MPC Approach .......................... 478
  João Lemos Nabais, Rudy R. Negenborn, Rafael Carmona-Benítez, and Miguel Ayala Botto

Reducing Port-Related Truck Emissions: Coordinated Truck Appointments to Reduce Empty Truck Trips ................................. 495
  Frederik Schulte, Rosa G. González, and Stefan Voß
Computational Intelligence to Support Cooperative Seaport Decision-Making in Environmental and Ecological Sustainability
Ana X. Halabi Echeverry, Jairo R. Montoya-Torres, Deborah Richards, and Nelson Obregon Neira

A Sample-Based Method for Perishable Good Inventory Control with a Service Level Constraint
Eligius M.T. Hendrix, Karin G.J. Pauls-Worm, Roberto Rossi, Alejandro G. Alcoba, and Rene Haijema

Pricing Intermodal Freight Transport Services: A Cost-Plus-Pricing Strategy
Le Li, Xiao Lin, Rudy R. Negenborn, and Bart De Schutter

External Coordination among Systems

Materials Flow Control in Hybrid Make-to-Stock/Make-to-Order Manufacturing
Filipa Rocha, Emanuel Silva, Angela Lopes, Luis Dias, Guilherme Pereira, Nuno O. Fernandes, and S. Carmo-Silva

A New Modelling Approach of Evaluating Preventive and Reactive Strategies for Mitigating Supply Chain Risks
Abroon Qazi, John Quigley, Alex Dickson, and Barbara Gaudenzi

Site Selection of the New Mexico City Airport from the Perspective of Maximizing the Sum of Expected Air Pax Demand
Rafael Bernardo Carmona-Benitez, Octavio Fernandez, and Esther Segura

Rescheduling Railway Traffic Taking into Account Minimization of Passengers’ Discomfort
Francesco Corman, Dario Pacciarelli, Andrea D’Ariano, and Marcella Samà

Design of an Efficient Algorithm to Determine a Near-Optimal Location of Parking Areas for Dangerous Goods in the European Road Transport Network
Maria D. Caro, Eugenio M. Fedriani, and Ángel F. Tenorio

Capacity Analysis of Freight Transport with Application to the Danish and Southern Swedish Railway
L. Blander Reinhardt, S. Nordholm, and D. Pisinger

Order Management in the Offshore Oil and Gas Industry
Henrik Andersson, Eirik F. Cuesta, Kjetil Fagerholt, Nora T. Gausel, and Martine R. Hagen
Computational Logistics
Corman, F.; Voß, S.; Negenborn, R.R. (Eds.)
2015, XV, 752 p. 215 illus. in color., Softcover
ISBN: 978-3-319-24263-7