

# Contents

## **Part I Mathematical Modeling in Transport and Production Logistics**

<b>Structural Properties of Third-Party Logistics Networks . . . . .</b>	<b>3</b>
Dieter Armbruster, M. P. M. Hendriks, Erjen Lefebber and Jan T. Udding	
<b>Development of a Computational System to Determine the Optimal Bus-stop Spacing in order to Minimize the Travel Time of All Passengers . . . . .</b>	<b>15</b>
Homero F. Oliveira, Mirian B. Gonçalves, Eduardo S. Cursi and Antonio G. Novaes	
<b>Some Remarks on Stability and Robustness of Production Networks Based on Fluid Models . . . . .</b>	<b>27</b>
Bernd Scholz-Reiter, Fabian Wirth, Sergey Dashkovskiy, Michael Schönlein, Thomas Makuschewitz and Michael Kosmykov	
<b>Online Optimization with Discrete Lotsizing Production and Rolling Horizons . . . . .</b>	<b>37</b>
Wilhelm Dangelmaier and Bastian Degener	
<b>Dynamic Vehicle Routing in Over Congested Urban Areas . . . . .</b>	<b>49</b>
Antonio G. N. Novaes, Enzo M. Frazzon and Paulo J. Burin	
<b>Serving Multiple Urban Areas with Stochastic Customer Requests . . . . .</b>	<b>59</b>
Stephan Meisel, Uli Suppa and Dirk Mattfeld	
<b>Stability Analysis of Large Scale Networks of Autonomous Work Systems with Delays . . . . .</b>	<b>69</b>
H. R. Karimi, S. Dashkovskiy and N. A. Duffie	

<b>Local Input-to-State Stability of Production Networks . . . . .</b>	<b>79</b>
Sergey Dashkovskiy, Michael Görges and Lars Naujok	
<b>An Approach to Model Reduction of Logistic Networks Based on Ranking . . . . .</b>	<b>91</b>
Bernd Scholz-Reiter, Fabian Wirth, Sergey Dashkovskiy, Michael Kosmykov, Thomas Makuschewitz and Michael Schönlein	
<b>Optimization of Spare Parts Lot Size for Supply of Equipment's Park . . . . .</b>	<b>105</b>
Iryna Morozova, Mykhaylo Postan and Lyudmyla Shyryaeva	
 <b>Part II Routing, Collaboration and Control</b>	
<b>Weighted Multiplicative Decision Function for Distributed Routing in Transport Logistics . . . . .</b>	<b>117</b>
Bernd-Ludwig Wenning, Henning Rekersbrink, Andreas Timm-Giel and Carmelita Görg	
<b>Distributed Decision Making in Combined Vehicle Routing and Break Scheduling . . . . .</b>	<b>125</b>
Christoph Manuel Meyer, Herbert Kopfer, Adrianus Leendert Kok and Marco Schutten	
<b>Dynamic Routing Applied to Mobile Field Service . . . . .</b>	<b>135</b>
Auro C. Raduan and Nicolau D. F. Gualda	
<b>Intelligent Agent Control and Coordination with User-Configurable Key Performance Indicators . . . . .</b>	<b>145</b>
Florian Pantke	
<b>Stockout Costs in Logistics Unconsidered . . . . .</b>	<b>161</b>
Henner Gärtner, Rouven Nickel and Peter Nyhuis	
<b>Performance Measurement for Interorganisational Collaborations of SMEs . . . . .</b>	<b>169</b>
Yilmaz Uygun and Andreas Schmidt	
<b>On the Formation of Operational Transport Collaboration Systems. . .</b>	<b>191</b>
Melanie Bloos and Herbert Kopfer	

<b>Adaptive RBAC in Complex Event-Driven BPM Systems . . . . .</b>	<b>203</b>
Bernardo N. Yahya and Hyerim Bae	
<b>A Preliminary Investigation on a Bottleneck Concept in Manufacturing Control . . . . .</b>	<b>213</b>
Bernd Scholz-Reiter, Katja Windt and Huaxin Liu	
 <b>Part III Information, Communication, Autonomy, Adaption and Cognition</b>	
<b>Synchronization of Material and Information Flows in Intermodal Freight Transport: An Industrial Case Study . . . . .</b>	<b>227</b>
Jannicke Baalsrud Hauge, Valentina Boschian and Paolo Pagenelli	
<b>EURIDICE: Platform Architecture in Logistics for “The Internet of Things” . . . . .</b>	<b>235</b>
Jens Schumacher, Manfred Gschweidl and Mathias Rieder	
<b>Initial Benefits of Using Intelligent Cargo Technology in Fresh Fishing Logistics Chain . . . . .</b>	<b>245</b>
Donatella Vedovato, Tatjana Bolic, Marco Della Puppa and Marco Mazzarino	
<b>Autonomous Co-operation of “Smart-Parts”: Contributions and Limitations to the Robustness of Complex Adaptive Logistics Systems. . . . .</b>	<b>255</b>
Michael Hülsmann, Benjamin Korsmeier, Christoph Illigen and Philip Cordes	
<b>Decentralisation and Interaction Efficiency in Cooperating Autonomous Logistics Processes. . . . .</b>	<b>269</b>
Arne Schuldt	
<b>Design Aspects of Cognitive Logistic Systems . . . . .</b>	<b>279</b>
Carsten Beth, Jens Kamenik, Dennis Ommen and Axel Hahn	
<b>Autonomous Units for Solving the Traveling Salesperson Problem Based on Ant Colony Optimization . . . . .</b>	<b>289</b>
Sabine Kuske, Melanie Luderer and Hauke Tönnies	

**Part IV Radio Frequency Identification**

**Dynamic Management of Adaptor Threads for Supporting Scalable RFID Middleware . . . . .** 301  
Chungkyu Park, Junho Lee, Wooseok Ryu, Bonghee Hong and Heung Seok Chae

**Tag-to-Tag Mesh Network Using Dual-Radio RFID System for Port Logistics . . . . .** 311  
Jinhwan Kim, Hyocheol Jeong, Myungjae Kim, Haosong Gou, Munseok Choi and Younghwan Yoo

**Automation of Logistic Processes by Means of Locating and Analysing RFID-Transponder Data . . . . .** 323  
Bernd Scholz-Reiter, Wolfgang Echelmeyer, Harry Halfar and Anne Schweizer

**Auto-Triggering of RFID-based Logistic Process in Inter-Workflow Using Complex Event . . . . .** 329  
Hyerim Bae and Yeong-Woong Yu

**Selectivity of EPC Data for Continuous Query Processing on RFID Streaming Events . . . . .** 341  
Mikyung Choi, Byungjo Chu, Gihong Kim and Bonghee Hong

**Criticality Based Decentralised Decision Procedures for Manufacturing Networks Exploiting RFID and Agent Technology . . .** 351  
Hermann Kühnle, Arndt Lüeder and Michael Heinze

**The Application of the EPCglobal Framework Architecture to Autonomous Control in Logistics . . . . .** 365  
Karl A. Hribernik, Carl Hans and Klaus-Dieter Thoben

**Design of Middleware Architecture for Active Sensor Tags. . . . .** 375  
Haipeng Zhang, Bonghee Hong and Wooseok Ryu

**Part V Production Logistics**

**Investigation of the Influence of Capacities and Layout on a Job-Shop-System’s Dynamics . . . . .** 389  
Bernd Scholz-Reiter, Christian Toonen and Jan Topi Tervo

<b>Modelling Packaging Systems in the Furniture Industry</b> . . . . .	399
Dennis Reinking and Hans Brandt-Pook	
<b>Monitoring Methodology for Productive Arrangements (Supply Chain)</b> . . . . .	409
Breno Barros Telles do Carmo, Marcos Ronaldo Albertin, Dmontier Pinheiro Aragão Jr. and Nadja G. S. Dutra Montenegro	
<b>Complexity-Based Evaluation of Production Strategies Using Discrete-Event Simulation</b> . . . . .	423
Reik Donner, Uwe Hinrichs, Christin Schicht and Bernd Scholz-Reiter	
<b>Converting Knowledge into Performance Within Global Production and Logistic Systems</b> . . . . .	433
Enzo Morosini Frazzon and Bernd Scholz-Reiter	
<b>Dynamic Scheduling of Production and Inter-Facilities Logistic Systems</b> . . . . .	443
Bernd Scholz-Reiter, Antônio G. N. Novaes, Thomas Makuschewitz and Enzo Morosini Frazzon	
 <b>Part VI Ports, Container Terminals, Regions and Services</b>	
<b>How can Electronic Seals Contribute to the Efficiency of Global Container System?</b> . . . . .	457
Kateryna Daschkovska and Bernd Scholz-Reiter	
<b>Resolution of the Berth Allocation Problem through a Heuristic Model Based on Genetic Algorithms</b> . . . . .	469
Vanina Macowski Durski Silva, Antônio G. Novaes and Antônio Sérgio Coelho	
<b>Development of a Genetic Algorithm for the Maritime Transportation Planning of Car Carriers</b> . . . . .	481
Jae Un Jung, Moo Hong Kang, Hyung Rim Choi, Hyun Soo Kim, Byung Joo Park and Chang Hyun Park	
<b>A Model of Wireless Sensor Networks Using Opportunistic Routing in Logistic Harbor Scenarios</b> . . . . .	489
Vo Que Son, Bernd-Ludwig Wenning, Andreas Timm-Giel and Carmelita Görg	

<b>Logistics Service Providers in Brazil: A Comparison Between Different Developed Regions . . . . .</b>	<b>501</b>
Mônica Maria Mendes Luna, Carlos Ernani Fries and Dmontier Pinheiro Aragão Júnioir	
<b>Adapting Dynamic Logistics Processes and Networks: Advantages Through Regional Logistics Clusters . . . . .</b>	<b>513</b>
Ralf Elbert, Hans-Dietrich Haasis, Robert Schönberger and Thomas Landwehr	
<b>Quotation Behaviour of Profit Centres for Offers on Dynamic Logistic Services . . . . .</b>	<b>529</b>
Bernd Pokrandt, Marcus Seifert and Stefan Wiesner	
<b>Long Haul Trucks Dynamic Assignment with Penalties . . . . .</b>	<b>539</b>
Antonio Martins Lima Filho and Nicolau D. Fares Gualda	

Dynamics in Logistics

Second International Conference, LDIC 2009, Bremen,  
Germany, August 2009, Proceedings

Kreowski, H.-J.; Scholz-Reiter, B.; Thoben, K.-D. (Eds.)

2011, XIV, 547 p., Hardcover

ISBN: 978-3-642-11995-8