

Eighth International Conference on Information Systems, Logistics and Supply Chain (ILS 2020)

Interconnected Supply Chains in an Era of
Innovation

Austin, Texas, USA
22 – 24 April 2020

ISBN: 978-1-7138-1065-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2020) by Texas State University
All rights reserved.

Printed with permission by Curran Associates, Inc. (2023)

For permission requests, please contact Texas State University
at the address below.

Texas State University
McCoy College of Business
601 University Drive
San Marcos Texas, USA
78666-4684

Phone: (512) 245-3189

www.txst.edu

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of Contents

Efficient Product Representations for Automotive Demand and Capacity Management.....	1
<i>Daniel Fruhner, Katja Klingebiel, Axel Wagenitz and Michael Toth</i>	
Impact of retail-platform loan programs on the SC performance under CSR dependent stochastic demand.....	9
<i>Dinh Anh Phan, Franck Moraux, Thi-Le-Hoa Vo and Anh-Ngoc Lai</i>	
Mining Serialized Data: Opportunities in the Pharmaceutical Supply Chain.....	20
<i>Angie Nguyen, Simon Tamayo, Samir Lamouri and David Carpentier</i>	
A Systematic Literature Review of Ecosystems: An Approach to Introduce Logistics Ecosystems into Academia.....	29
<i>Marvin Lamberjohann and Boris Otto</i>	
Sustainable and collaborative local productive arrangement strategies to guarantee an eco-market concept.....	37
<i>Lais da Silva Oliveira, Alexander Georges Meytre Junior, Luiz Teruo Kawamoto Junior and Sivanilza Teixeira Machado</i>	
A Digital Twin Framework of a Material Handling Operator in Industry 4.0 Environments.....	45
<i>Abhimanyu Sharotry, Jesus Jimenez, David Wierschem, Francis Mendez, George Koutitas, Damian Valles, Semih Aslan and Koldenhoven Rm</i>	
Brazilian Import Transport Network of Fertilizer (NPK): An Analysis using SNA.....	53
<i>Joao Reis, Sivanilza Machado, Fernando Gorni Neto, Aguinaldo Souza and Irenilza Naas</i>	
An Evolutionary Algorithm based on Multidimensional Multiple-Choice Knapsack Model for Resource Allocation Problem in a Construction Equipment Manufacturer.....	60
<i>Alejandra Duenas, Christine Di Martinelly, Joaquin Aguado and Yazgi Tutuncu</i>	
A New S&OP Maturity Assessment Model for Mass Customization Production Systems: A Case Study of an Automotive OEM.....	70
<i>Yahya Ghrab and Mustapha Sali</i>	
Toward Automated Qualitative Supply Chain Diagnoses in Engineering-to-Order Environment.....	79
<i>Anthony Fouqué, Matthieu Lauras, Hamideh Afsarmanesh and Frédérick Benaben</i>	
Transportation Lot Sizing Problem: An Airbus Case Study.....	87
<i>David Arturo Pardo Melo, Vincent Bernier, Yannick Frein and Bernard Penz</i>	
A Bibliographic Review and Qualitative Comparison of Scenarios for Returnable Transport Items	

Distribution Planning in the Automotive Industry	95
<i>Najoua Lakhmi, Evren Sahin and Yves Dallery</i>	
Implementing e-Health Interoperability with KBE. Building a Universal Medical Record in Brazil....	103
<i>Neusa Andrade, Henrique Ribeiro, Jair Torres, Pedro Costa Neto, Irapuan Junior and Welleson Gazel</i>	
Inter-firm relationships in the construction industry: a systematic literature review.....	111
<i>Ahmed Khouja, Nadia Lehoux and Yan Cimon</i>	
Using Quality Function Deployment (QFD) Combined with the World Caf�e Method in a Smart Cities Application.....	119
<i>Jair Gustavo de Mello Torres, Neusa Andrade and Pedro Costa Neto</i>	
Indoor Positioning based Data Management System for Smart Factory	127
<i>Jinsung Park, Sungjin Lee, Jesus Jimenez and Junwoo Kim</i>	
Decision-Making in Coffee Supply Chains: An AHP application Considering Minas Gerais Case, Brazil.....	135
<i>Paula Ferreira da Cruz Correia and Jo�o Gilberto Mendes dos Reis</i>	
Brazilian Soybean Logistics Bottleneck: A Proposal for Allocation and Dimensioning of Intermodal Terminals in the State of Mato Grosso.....	143
<i>Gabriel de Oliveira, Gustavo de Moraes and Rodney Saldanha</i>	
Food Security: A Case Study in the Guarani Rio Branco and Aguapeu� Indigenous Villages	151
<i>Aguinaldo Eduardo de Souza, Jo�o Gilberto Mendes Dos Reis, Luciana Melo Costa, Emerson Rodolfo Abraham and Oduvaldo Vendrametto</i>	
PRONAF Rural Financing Distribution Study in Brazilian States	159
<i>Aguinaldo de Souza, Joao Gilberto Mendes Dos Reis, Paula Ferreira Da Cruz Correia, Oduvaldo Vendrametto and Joao Jos� Giardulli Junior</i>	
Reduction of Number of Empty-Truck Trips in Inter-Terminal Transportation using Multi-agent Q-Learning	167
<i>Taufik Nur Adi, Yelita Anggiane Iskandar, Hyerim Bae and Yulim Choi</i>	
Costs of Soybean Transportation in Piau� State, Brazil: A Case Study	173
<i>Jos� Alberto Luz and Joao Gilberto Mendes Dos Reis</i>	
Considering quasi-real time delivery information in product recommendation	180
<i>Camelia Dadouchi and Bruno Agard</i>	
Towards Hybrid Machine Learning Models in Decision Support Systems for predicting the Spare Parts Reverse Flow in a Complex Supply Chain	188

<i>Hamza El Garrab, Bruno Castanier, David Lemoine, Adnane Lazrak and Robert Heidsieck</i>	
On the Interest of Reconsidering a Real-Life Car Sequencing Model.....	196
<i>Adele Louis, Gülgün Alpan and Bernard Penz</i>	
A DDMRP implementation user feedbacks and stakes analysis.....	204
<i>Guillaume Dessevre, Jacques Lamothe, Vincent Pomponne, Matthieu Lauras, Pierre Baptiste and Robert Pellerin</i>	
Make-to-Order Production Planning with Uncertain Quality	212
<i>Dincer Konur and Tahir Ekin</i>	
Closed loop supply chain optimization for Circular Manufacturing using Industry 4.0 technologies ...	220
<i>Victor Delpla, Lucas Hof and Jean-Pierre Kenné</i>	
Measurement of the Alignment of Information Systems	228
<i>Hamza Darii, Jannik Laval, Valérie Botta-Genoulaz and Virginie Goepp</i>	
Retailing Competition for Substitutable Products in Greenness- and Price-Dependent Market	236
<i>Erfan Asgari, Ramzi Hammami and Yannick Frein</i>	
An efficient heuristic for the multi-product straight pipeline scheduling problem.....	244
<i>Meryem Bamoumen, Selwa Elfirdoussi, Libo Ren and Nikolay Tchernev</i>	
Biofuel Supply Chain Design Using Coffee Crop Residues: The Effect of a Dynamic	
Capacity Strategy on Sustainable Performance	252
<i>Marcela María Morales Chavez, William Sarache and Yasel Costa-Salas Collaborative Supply Chain Distribution Planning under uncertainty</i>	<i>260</i>
<i>Sanaa Tiss, Lamothe Jacques and Caroline Thierry</i>	
Disjunctive Scheduling with Setup Times: Optimizing a Food Factory.....	268
<i>Nicolas Blais, Alexis Remartini, Claude-Guy Quimper, Nadia Lehoux and Jonathan Gaudreault</i>	
Toward Assessing Physical Internet Potential Benefits for Humanitarian Supply Chains.....	276
<i>Manon Grest, Matthieu Lauras and Benoit Montreuil</i>	
Best Practices for Implementing Building Information Modeling in the Prefabrication Sector.....	284
<i>Basma Ben Mahmoud, Nadia Lehoux and Pierre Blanchet</i>	
Automating the avocado Supply Chain with Blockchain and Off-chain	292
<i>Juan Carlos Lopez-Pimentel, Omar Rojas, Miguel Alcaraz-Rivera, Guillermo Sosa-Gomez and Leslie Verteramo-Chiu</i>	

Data-Driven Scalable E-commerce Transportation Network Design with Unknown Flow Response... 299	
<i>Shuyu Chen, Jing-Sheng Song and Yehua Wei</i>	
Proposal for improving the service process in the maintenance to clients of a natural gas distributor: a VBA automation study	307
<i>José Carlos Jacintho, Lucas Franco, Athos Martins, Marinete Silva and Ridnal Nascimento</i>	
An Integrated approach for Analyzing Stores' Performance for Centralized Retail Chain Using Machine learning and Multicriteria Decision Making Techniques	315
<i>Hafsa Mohsin and Huff Brian</i>	
A Case Study of the Reliability of Time-Sensitive Drone Deliveries.....	323
Travis Glick, Miguel Figliozzi and Avinash Unnikrishnan	
A Study of the Competitiveness of Autonomous Delivery Vehicles in Urban Areas	331
Miguel Figliozzi and Dylan Jennings	
Improvements in the Brazilian School Feeding Programme Routing: A Spatial Analysis and Discrete Event Simulation Approaches	339
<i>Joao Maiellaro, Joao Gilberto Mendes dos Reis, Oduvaldo Vendrametto, Fernando Muçouçah, Valeria Maiellaro and Sivanilza Machado</i>	
Data Supply Chains for Data Science.....	348
<i>Hsun-Ming Lee, David Angelow and Francis Mendez Mediavilla</i>	
Technological Trends in Last-mile Contexts: a European Perspective.....	356
<i>Anna Corinna Cagliano, Giulio Mangano and Giovanni Zenezini</i>	
Addressing the water-energy-food nexus through a green supply chain network design strategy	365
<i>Marco A. Miranda-Ackerman, Catherine Azzaro-Pantel and Alberto A. Aguilar-Lasserre</i>	
Cargo Vehicle Combinations: An Economic and Environmental Approach to Soybean Supply Chain in Mato Grosso, BrazilSoybean Supply Chain	373
<i>Rodrigo Toloï, Marley Toloï, Joao Gilberto Mendes Dos Reis, Antônio Carlos Machado, Sivanilza Machado, Audiene Rabelo and Silvia Bonilla</i>	
Humanitarian Response Readiness Metric for More Effective Relief Operations	381
<i>Mahmut Metin Inan, Benoit Montreuil, Mohammed Faisal Ahmed and Matthieu Lauras</i>	
Logistic requirements considering environmental sensitive demand: evidence from the French food distribution sector.....	389
<i>Laura Palacios Arguello, Salomé Ruel, Jesus Gonzalez-Feliu and Natacha Gondran</i>	
Improvement of freight consolidation with a data mining technique	398

Zineb Aboutalib and Bruno Agard

Heuristic for the Continuous and Dynamic Berth Allocation Problem in Dry Bulk terminals with tidal and stock levels constraints 406

Nicolas Cheimanoff, Frédéric Fontane, Mohamed Nour Kitri and Nikolay Tchernev

The parcel locker location problem: an overview of factors affecting their location 414

Alexandra Lagorio and Roberto Pinto

Preliminaries on Supply Chain Risk & Sustainability 422

Cecilia Temponi

Defining and characterizing Urban Logistics Spaces: insights from a port city and generalization issues 428

Karen Meza-Peralta, Jesus Gonzalez-Feliu, Jairo Rafael Montoya Torres and Laura Palacios-Argüello

A constraint programming model for a parallel machine scheduling problem under resource constraints 436

Mohamed Amine Abdeljaouad, Zied Bahroun and Nour El Houda Saadani