Paulina Golinska-Dawson Editor

Logistics Operations and Management for Recycling and Reuse



Contents

Circular Economy Towards Circular Economy Transition—Developing the Innovative Sustainable Practices in Logistics Industry 3 Paulina Golinska-Dawson A Literature Analysis of Definitions for a Circular Economy 19 Usama Awan, Narmeen Kanwal, and Mohammed Khurrum S. Bhutta **Reverse Logistics Flows and Network's Configuration Problems** Robust Reverse Logistics Network Design 37 Péter Egri, Balázs Dávid, Tamás Kis, and Miklós Krész **Drivers and Barriers for Cooperation Between Municipalities** in Area of Municipal Solid Waste Management 55 Paulina Golinska-Dawson, Arkadiusz Kawa, and Piotr Januszewski A Novel Formulation for the Sustainable Periodic Waste Collection **Arc-Routing Problem: A Hybrid Multi-objective Optimization** Algorithm 77 Erfan Babaee Tirkolaee, Alireza Goli, Gerhard-Wilhelm Weber, and Katarzyna Szwedzka A Perishable Product Sustainable Supply Chain Network Design **Problem with Lead Time and Customer Satisfaction using** a Hybrid Whale-Genetic Algorithm 99 Alireza Goli, Erfan Babaee Tirkolaee, and Gerhard-Wilhelm Weber Practical Aspects of Application the 3R (Reduce, Recycle, Reuse) How to Assess Internal Transport in Terms of Sustainability

Izabela Kudelska and Monika Kosacka-Olejnik

X	Contents

Principle of the Cognitive Grinding of Reuse Materials	145
Smart-Tracking Systems Development with QR-Code and 4D-BIM	
for Progress Monitoring of a Steel-Plant Blast-Furnace Revamping	1.61
Project in Korea H. Y. Roh, E. B. Lee, I. H. Jung, and C. Y. Kim	161