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Editorial

Recent Advances of Solutions Algorithms for Logistics Routing Problems

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Nowadays, the business landscape is highly focused on establishing efficient logistics systems, with numerous companies striving to gain a strong foothold in the global market and achieve maximum productivity and cost effectiveness. Consequently, logistics management has become a crucial tool for these organizations to ensure the timely delivery of their products to customers while optimizing costs. Logistics management encompasses the entire process, including the planning, execution, and monitoring of the flow of raw materials and finished goods from suppliers to end customers.

Logistics is defined as the set of procedures and tools essential for organizing a company or service, with a focus on product quantity, geographical location, and specific timeframes. Different objectives within logistics are addressed, taking into account economic, environmental, and social considerations. By achieving optimal levels of these objectives, companies can attain sustainable development. However, despite tangible advantages in the logistics sector, such as cost reduction, efficient transportation, express delivery, and information technology integration, there are also significant challenges that must not be overlooked. These challenges include coordination issues, high transportation costs, legal complexities, and the impact on multinational and large companies.

In recent years, information technology advancements, particularly in the realm of the Internet of Things (IoT), have significantly enhanced the virtual world's effectiveness. IoT, with its growing prominence in our lives, leverages object intelligence through devices such as radio frequency identification (RFID), global positioning systems (GPS), and various other sensor equipment connected to the internet. Researchers have explored the applicability of operations research (OR) and related topics in logistics management. Among the most valuable applications of OR is logistics modeling for various optimization problems, such as the vehicle routing problem (VRP), arc routing problem (ARP), and capacitated arc routing problem (CARP). The focus of this special issue (SI) was to contribute to the development of models and solution algorithms in logistics routing problems.

To address the aforementioned needs, this SI entitled "Recent Advances of Solutions Algorithms for Logistics Routing Problems" received six manuscripts. Most of the submissions were in compliance with the research topics of this SI. In particular, three manuscripts were accepted for publication in *Logistics* after the authors provided the requested revisions; the acceptance rate was 50%.

The published manuscripts in this SI thoroughly explored the application of optimization techniques, aiming to consolidate the latest advancements in novel models and solutions. These contributions aimed to enhance our understanding of transportation and logistics systems' performance and offer practical strategies to improve them. The specific details of the contributions are as follows:

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- A mixed-integer nonlinear programming model was developed by Prajapati et al. (2021) to formulate a VRP for delivering the products in a lesser time horizon with driver safety concern considerations in business e-commerce platforms. They used LINGO and genetic algorithm to tackle the problem.
- A heuristic solution method based on the greedy randomized adaptive search procedure as well as a fleet deployment heuristic algorithm was suggested by Bolstad et al. (2022) to assess the operational costs of composing vessel fleets for the maintenance of offshore wind farms.
- A generic transport system for same-day delivery was proposed by Schuur and Kellersmann (2022) in order to match long-distance bulk distribution with local distribution. They employed mobile hub networks in combination with long combination vehicles (LCVs) to generate routes that comply with EU transport rules.

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