Call for Papers
Special Issue "Optimization and Artificial Intelligence in Logistics Management" in "*Annals of Operations Research*"

Nowadays, the increasing volume of information, as well as complexity around logistics, makes it imperative to jointly use optimization and artificial intelligence for devising data-driven and intelligent decision support approaches. In the last decade, relevant efforts and initiatives from all sides of optimization and artificial intelligence have been undertaken to improve logistics operations and services by means of systems, platforms, algorithms and tools. This resulted in advances in both theoretical and practical aspects as well as technical innovations in several logistics sectors such as maritime shipping, freight transportation, urban distribution multi-modal transportation, to name just a few.

The main goal of this special issue is to publish comprehensively collected cutting-edge research and recent advances in optimization and AI in logistics. This issue will provide readers with high-quality contributions exploring and dealing with optimization problems in the field of logistics while discussing advanced methods for solving them. Examples involve the joint use of machine learning and mathematical programming, integrating information systems with optimization algorithms, theoretical or empirical studies in modern operations research, developing truly-brained systems to support logistics decisions, etc. Thus, this special issue seeks to contribute to the literature with relevant theoretical and practical works promoting the progress of operations research and artificial intelligence towards intelligent and adaptive decision support systems in all types of logistics fields.

Selected works from the 11th International Conference on Computational Logistics (ICCL 2020) will be invited to submit an extended version of their accepted paper for ICCL 2020 to this special issue. This call is also open to authors that could not participate in the conference, provided the paper fits within the scope of this special issue and that an extended abstract of the paper has been approved by the guest editors; deadline for this extended abstract is September 20, 2020.

The main topics of interest are:

- Data-driven approaches in logistics
- Advances in optimization models
- Combination of methods from artificial intelligence and operations research in transportation and logistics
- Algorithms and platforms for logistics management
- Applications of AI and its related technologies to logistics

- Modern vehicle and transportation optimization problems

- Integrating planning and control

- Theoretical and/or empirical analysis of AI approaches in logistics

- Intelligent decision making under uncertainty

- Freight logistics in smart cities

- Knowledge-based systems and hybrids

- Heuristics, metaheuristics, and hyperheuristics-based systems

- Production and delivery synchronization

- Collaborative and self-organizing logistics

- Multi-modal intelligent transport systems and services

- Intelligent techniques for online and offline planning

- Computational intelligence in logistics

- Intelligent decision support in air, land, or maritime logistics.

Instructions for authors can be found at:

https://www.springer.com/journal/10479/submission-guidelines

Invited authors from ICCL2020 are asked to submit the manuscript accompanied by a cover letter indicating the relevant contribution with regards to the conference submission between **September 30, 2020 and January 15, 2021** via the Journal's online submission site. Manuscripts submitted after the deadline may not be considered for the special issue and may be transferred to a regular issue. Authors not participating in the conference but with a contribution to the scope of this special issue, are asked to send an extended abstract before September 20, 2020 to the guest editors on their contribution prior to submission.

Please see the Author Instructions on the web site if you have not yet submitted a paper through Springer's web-based system *Editorial Manager*. When prompted, please select the special issue's title, **Optimization and Artificial Intelligence in Logistics Management** to ensure that it will be reviewed for this special issue.

Papers will be subject to a strict review process managed by the Guest Editors and accepted papers will be published online individually, before print publication. Please keep in mind that the quality and relevance to the special issue's topic are the two most important criteria for accepting contributions. Moreover, for those papers, related to a conference contribution, they are required to provide a substantial contribution, citing the conference work, and providing a novel and incremental contribution listed in the cover letter.

Guest Editors:

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