

# Call for papers

## **SI: Computational Methods for Supply Chain and Logistics Planning Problems**

Advances in computing power combined with methodological developments hold promise for obtaining optimal or near-optimal solutions for large-scale optimization problems containing high degrees of uncertainty and complexity. The increased availability of real-time and transactional data also provides opportunities to gain a deeper understanding of the behavior and properties of dynamic systems, and to develop models with greater fidelity.

Global supply chains are prime examples in this domain. They are prohibitively complex and dynamic, compounding existing challenges inherent in efficiently matching supply and demand. Recent world events have revealed the vulnerability of numerous supply chains to external shocks and sources of uncertainty, which has led researchers in academia, with the support of government and industry initiatives, to rethink supply chain planning approaches in order to improve their performance and resilience. This requires leveraging recent computational and methodological advances to address these emerging challenges for large-scale and integrated systems.

In light of these developments, this special issue is devoted to recent advances that leverage computational methods for dealing with high degrees of complexity and uncertainty to address complex supply chain and logistics problems. The goal of this issue is to publish high-quality, concise articles with innovative developments that have the potential for application in practice. The objective is to disseminate the knowledge generated via novel computational methods in the supply chain and logistics planning area.

### **Topics**

This special issue of Optimization Letters is open to all areas of computational methods, including exact and heuristic solution approaches, mainly focusing on problems in supply chain management and logistics planning. Topics of interest include, but are not limited to:

- Approximate dynamic programming
- Sample average approximation methods
- AI/machine learning techniques, especially with the integration of optimization methods to speed up classical solution approaches, such as branch-and-cut, benders decomposition, column generation, etc.
- Reinforcement learning
- Parallel search algorithm development

- Estimation methods for optimal solutions
- Distributed optimization

## Submissions

Manuscripts should be prepared using Springer's LaTeX macro package and submitted through the journal's editorial manager <https://www.editorialmanager.com/optl>. Each manuscript will be peer-reviewed according to the editorial policy of *Optimization Letters*. Articles should be original, unpublished, and not currently under consideration for publication elsewhere.

Please select **SI: CompSCL2023** for the article type when submitting your contribution. All papers will go through a regular peer review process.

## Important Dates

Submission Deadline: **September 1, 2023.**

## Guest Editors

- Joseph Geunes, Texas A&M University, College Station, TX
- Bahar Çavdar, Texas A&M University, College Station, TX
- Reem Khir, Purdue University, West Lafayette, IN