

CALL FOR PAPERS

Special Issue on

Machine Learning and Combinatorial Optimization

Special Issue Editors:

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Submission deadline: January 31th, 2020



<http://www.springer.com/291>

Machine Learning (ML) has recently emerged as a prospective area of investigation for OR in general, and specifically for Combinatorial Optimization (CO). Following the impressive boost in the effectiveness of deep learning models, new approaches, such as Neural Combinatorial Optimization, have been proposed as frameworks to tackle combinatorial optimization problems using ML techniques, while OR conferences and workshops are featuring an ever increasing number of events and contributions related to these new trends.

This special issue aims at presenting an overview of the state-of-the-art of the field, welcoming contributions about innovative research both on machine learning addressing CO problems or supporting CO approaches, and on CO algorithms addressing ML issues. Topics of interest include but are not limited to:

- Combinatorial Problem Modeling
- Solution Generation
- Search Guidance
- Uncovering Hidden Structures and Patterns in Data
- Parameter Learning and Adaptive Adjustment
- ML for Assisted Decision Support in CO Algorithms
- Real-world Application of ML-CO Models
- Hybridization of ML and CO

Contributions should investigate the application of novel approaches, be it on the side of modelling, computational solution procedures, technologies, or analytics, to the synergy of machine learning and combinatorial optimization. In line with the aims and scope of OR Spectrum, manuscripts should emphasize the practical relevance and the methodological contribution of the work.

Submission Guidelines and Review Process: Papers must be submitted at <http://www.editorialmanager.com/orsp/> under the category “Machine Learning and Combinatorial Optimization” by January 31, 2020. All papers submitted to this special issue should report original work and make a contribution to the journal OR Spectrum by using a quantitative research paradigm and OR methodologies. According to the aims of OR Spectrum, high quality papers are wanted that match the scope of the journal, show rigor in applying state-of-the-art OR techniques, and promise to have an impact on future work of the OR community.

Each paper will be screened by the Editor-in-Chief and one special issue editor. If the paper is deemed to be of sufficient quality, it will be reviewed according to the standards of OR Spectrum by at least two experienced reviewers. We will adopt a rapid and fair review process striving to provide reviews within three months of submission. Accepted papers will be available online prior to the publication of the special issue.

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