

Special Issue on Transport Scheduling

**Special Issue on “Transport Scheduling:
Meeting the Challenges of Scale, Complexity and Uncertainty”
*Computers and Operations Research***

Deadline for Submissions: 15th December 2009

Great progress has been made over several decades in the development of planning and scheduling tools to support transportation. However, this has largely been achieved by partitioning the planning process into stages, and by taking little account of the operability of the resulting schedule under disruption. In recent years, a growing body of work has emerged that seeks to address these issues; there is much evidence to suggest that more integrated planning can both reduce costs significantly, and can lead to more robust schedules. Improvements in optimization technologies, algorithms and software have also opened up the possibility of optimization-based real-time scheduling, and increased interest in the use of optimization for recovery and disruption handling.

Excellent research on transportation scheduling is being done within specific application areas, e.g. airline planning, rail, sea, freight, or public transport, producing exciting new results in these fields. However the challenges they present, whilst of course reflecting domain-specific differences, nevertheless have significant features in common. The aim of this special issue is to bring together research across these domains, so as to facilitate comparison and cross-fertilization of ideas.

The focus of this special issue is on models, algorithms and software for optimization of transportation schedules, including freight, passenger, commercial and public transportation, cyclic or ad hoc schedules, on any mode of transport, including road, rail, ship, air, or multi-modal, to meet fixed or dynamic known or uncertain demand. Potential topics include, but are not restricted to:

- Benchmark problems for transportation scheduling
- Service network design
- Inventory routing
- Integrated scheduling
- Robust scheduling
- Disruption handling and recovery
- Online scheduling in transportation
- Optimization methods for multi-modal freight

The focus of submitted papers may be on any aspect of transportation scheduling, from schedule design itself, to a focus on the activities of crew, vehicles, passengers or freight, or on integration of these. Papers investigating fundamental structures underpinning transportation scheduling problems, or addressing generalized models, are also encouraged.

Recent research suggests serious inroads can be made in these challenging areas of transportation scheduling through the combined use of cross-disciplinary techniques.

Thus we encourage submissions from across the Operations Research, Constraint Programming, Artificial Intelligence and Scheduling communities, and in particular, submissions that “hybridize” algorithms.

To prepare their manuscript, authors are asked to closely follow the “Instructions to Authors” of Computers & Operations Research. Authors should submit their paper via the Computers and Operations Research online submission and editorial system at:

<http://www.ees.elsevier.com/cor>

and select “Special Issue: Transport Scheduling” as the “Article Type”. Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Refereeing and the selection of papers will be carried out according to the standards of Computers & Operations Research.

Publication Schedule

Manuscript submission to begin: November 1st, 2009

Manuscript submission to close: December 15th, 2009

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