

1. Record Nr.	UNINA9910483050603321
Titolo	Robust and Online Large-Scale Optimization [[electronic resource]] : Models and Techniques for Transportation Systems / / edited by Ravindra K. Ahuja, Rolf H. Möhring, Christos D. Zaroliagis
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2009
ISBN	3-642-05465-X
Edizione	[1st ed. 2009.]
Descrizione fisica	1 online resource (XVIII, 423 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5868
Classificazione	004 BAU 853f MAT 910f SS 4800
Disciplina	004n/a
Soggetti	Computers Electronic digital computers—Evaluation Computers, Special purpose Computer simulation Security systems Discrete mathematics Hardware Performance and Reliability System Performance and Evaluation Special Purpose and Application-Based Systems Computer Modelling Security Science and Technology Discrete Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Robustness and Recoverability: New Concepts -- The Concept of Recoverable Robustness, Linear Programming Recovery, and Railway Applications -- Recoverable Robustness in Shunting and Timetabling -- Light Robustness -- Incentive-Compatible Robust Line Planning -- A Bicriteria Approach for Robust Timetabling -- Robust Timetabling and Route Planning -- Meta-heuristic and Constraint-Based

Approaches for Single-Line Railway Timetabling -- Engineering Time-Expanded Graphs for Faster Timetable Information -- Time-Dependent Route Planning -- The Exact Subgraph Recoverable Robust Shortest Path Problem -- Efficient Timetable Information in the Presence of Delays -- Robust Planning under Scarce Resources -- Integrating Robust Railway Network Design and Line Planning under Failures -- Effective Allocation of Fleet Frequencies by Reducing Intermediate Stops and Short Turning in Transit Systems -- Shunting for Dummies: An Introductory Algorithmic Survey -- Integrated Gate and Bus Assignment at Amsterdam Airport Schiphol -- Online Planning: Delay and Disruption Management -- Mining Railway Delay Dependencies in Large-Scale Real-World Delay Data -- Rescheduling Dense Train Traffic over Complex Station Interlocking Areas -- Online Train Disposition: To Wait or Not to Wait? -- Disruption Management in Passenger Railway Transportation.

Sommario/riassunto

Scheduled transportation networks give rise to very complex and large-scale network optimization problems requiring innovative solution techniques and ideas from mathematical optimization and theoretical computer science. Examples of scheduled transportation include bus, ferry, airline, and railway networks, with the latter being a prime application domain that provides a fair amount of the most complex and largest instances of such optimization problems. Scheduled transport optimization deals with planning and scheduling problems over several time horizons, and substantial progress has been made for strategic planning and scheduling problems in all transportation domains. This state-of-the-art survey presents the outcome of an open call for contributions asking for either research papers or state-of-the-art survey articles. We received 24 submissions that underwent two rounds of the standard peer-review process, out of which 18 were finally accepted for publication. The volume is organized in four parts: Robustness and Recoverability, Robust Timetabling and Route Planning, Robust Planning Under Scarce Resources, and Online Planning: Delay and Disruption Management.
