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Soggetti	Project management Operations research Decision making Management science Management Industrial management Production management Mathematical optimization Project Management Operations Research/Decision Theory Operations Research, Management Science Innovation/Technology Management Operations Management Discrete Optimization
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	1. Introduction -- 2. Problem Statements -- 3. Literature Review -- 4. Continuous-time Markov Decision Processes -- 5. Generation of

Problem Instances -- 6. Scheduling Using Priority Policies -- 7. Optimal and Near Optimal Scheduling Policies -- 8. Integrated Dynamic Order Acceptance and Capacity Planning -- 9. Conclusions and Future Work.

Sommario/riassunto

This book deals with dynamic and stochastic methods for multi-project planning. Based on the idea of using queueing networks for the analysis of dynamic-stochastic multi-project environments this book addresses two problems: detailed scheduling of project activities, and integrated order acceptance and capacity planning. In an extensive simulation study, the book thoroughly investigates existing scheduling policies. To obtain optimal and near optimal scheduling policies new models and algorithms are proposed based on the theory of Markov decision processes and Approximate Dynamic programming. Then the book presents a new model for the effective computation of optimal policies based on a Markov decision process. Finally, the book provides insights into the structure of optimal policies.
