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Pinedo, Michael L.**Planning and scheduling in manufacturing and services. With CD-ROM. 2nd ed.** (English)

Dordrecht: Springer. xviii, 536 p. EUR 64.95/net; SFR 101.00; £ 58.99; \$ 79.95 (2009). ISBN 978-1-4419-0909-1/hbk; ISBN 978-1-4419-0910-7/ebook

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The second edition of this book is a slight extension of the first edition from 2005. The major change in the new edition results from the inclusion of a new chapter on health care. Three sections of this new chapter deal with scheduling a single operation room as well as multiple operating rooms. They describe several approaches for these types of problems. Such problems are related both to parallel machine scheduling problems as well as timetabling problems. In addition, this chapter also includes the planning and scheduling of radiotherapy treatments (which is a special case of an appointment scheduling problem), the assignment of physicians to emergency room shifts (which is a special case of workforce scheduling problems) and a description of an actual system for surgery scheduling and bed occupancy levelling in a hospital in Belgium.

With this extension, the book includes now exactly 10 application areas, namely five in the part dealing with manufacturing (project planning and scheduling; machine scheduling and job shop scheduling; scheduling of flexible assembly systems; economic lot scheduling; and planning and scheduling in supply chains) and five in the part dealing with services (interval scheduling, reservations, and timetabling; scheduling and timetabling in sports and entertainment; planning, scheduling, and timetabling in transportation; planning and scheduling in health care; and workforce scheduling).

Moreover, the new version includes some minor changes which e.g. involve more cross-references that point out the relationships between the different models discussed in the particular chapters. In addition, there is maintained a website for this book at <http://www.stern.nyu.edu/~mpinedo>, where e.g. an up-to-date list of the instructors using this book and also relevant material becoming available after the second edition has appeared can be found.

As for the first edition of this book, a CD-ROM is enclosed which contains a large variety of powerpoint slides and various planning and scheduling systems (e.g. the LEKIN system). In comparison with the first edition, there have been added three new sets of slides from academia and another movie from United Airlines. Summarizing, the broad spectrum covered by the book makes it very attractive for all people working in the scheduling area and can be highly recommended by the reviewer.

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Keywords : scheduling; planning; manufacturing systems; shop scheduling; flexible assembly systems; economic lot scheduling; supply chains; timetabling; transportation; health care; workforce scheduling; heuristics

Classification :

*90B35 Scheduling theory

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