
Description: Critically acclaimed text for computer performance analysis—now in its second edition

The Second Edition of this now-classic text provides a current and thorough treatment of queueing systems, queueing networks, continuous and discrete-time Markov chains, and simulation. Thoroughly updated with new content, as well as new problems and worked examples, the text offers readers both the theory and practical guidance needed to conduct performance and reliability evaluations of computer, communication, and manufacturing systems.

Starting with basic probability theory, the text sets the foundation for the more complicated topics of queueing networks and Markov chains, using applications and examples to illustrate key points. Designed to engage the reader and build practical performance analysis skills, the text features a wealth of problems that mirror actual industry challenges.

New features of the Second Edition include:
- Chapter examining simulation methods and applications
- Performance analysis applications for wireless, Internet, J2EE, and Kanban systems
- Latest material on non-Markovian and fluid stochastic Petri nets, as well as solution techniques for Markov regenerative processes
- Updated discussions of new and popular performance analysis tools, including ns-2 and OPNET
- New and current real-world examples, including DiffServ routers in the Internet and cellular mobile networks

With the rapidly growing complexity of computer and communication systems, the need for this text, which expertly mixes theory and practice, is tremendous. Graduate and advanced undergraduate students in computer science will find the extensive use of examples and problems to be vital in mastering both the basics and the fine points of the field, while industry professionals will find the text essential for developing systems that comply with industry standards and regulations.

Additionally, a solution manual and an FTP site with links to author-provided data for the book are available for deeper study.


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