



QUEUEING SYSTEMS, VOLUME 2 : COMPUTER APPLICATIONS

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SUMMARY

This book presents and develops methods from queuing theory in sufficient depth so that students and professionals may apply these methods to many modern engineering problems, as well as conduct creative research in the field.

It provides a long-needed alternative both to highly mathematical texts and to those which are simplistic or limited in approach. Written in mathematical language, it avoids the "theorem-proof" technique: instead, it guides the reader through a step-by-step, intuitively motivated yet precise development leading to a natural discovery of results. Queuing Systems, Volume 1 covers material ranging from a refresher of transform and probability theory through the treatment of advanced queuing systems. It is divided into four sections: 1) preliminaries; 2) elementary queuing theory; 3) intermediate queuing theory and 4) advanced material!

Important features of Queuing Systems, Volume 1: Theory include:

- techniques of duality, collective marks
- queuing networks
- complete appendix on z-transforms and Laplace transforms
- an entire appendix on probability theory, providing the notation and main results

needed throughout the text

- definition and use of a new and convenient graphical notation for describing the arrival and departure of customers to a queuing system
- a Venn diagram classification of many common stochastic processes

1975 (0 471-49110-1) 417 pp.

FUNDAMENTALS OF QUEUEING THEORY . Second Edition

Donald Gross and Carl M. Harris

This graduated, meticulous look at queuing fundamentals developed from the authors lecture notes presents all aspects of the methodology - including Simple Markovian birth-death queuing models; advanced Markovian models; networks, series, and cyclic queues; models with general arrival or service patterns; bounds, approximations, and numerical techniques; and simulation - in a style suitable to courses of study of widely varying depth and duration. This Second Edition features new expansions and abridgements which enhance pedagogical use: new material on numerical solution techniques for both steady-state and transient solutions; changes in simulation language and new results in statistical analysis; and more. Complete with a solutions manual, here is a comprehensive, rigorous introduction to the basics of the discipline.

1985 (0471-83143-3) 220 pp.

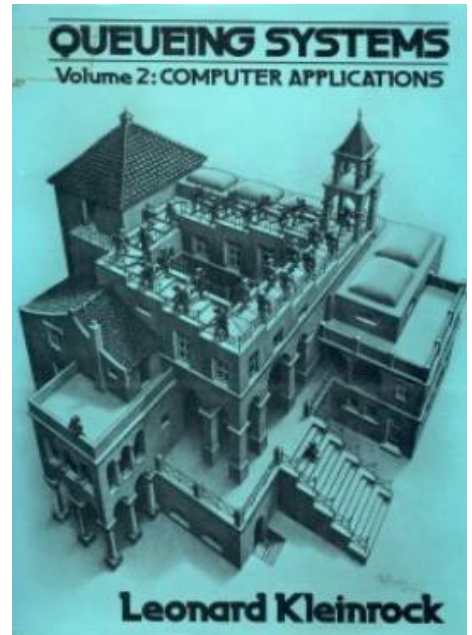


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Queueing Systems, Volume 2. export records of this page. first 1000 hits only: XML. JSON. JSONP. BibTeX. R. Lal, U. Narayan Bhat: Reduced Systems in Markov Chains and Their Applications in Queueing Theory. 147-172. view. electronic edition via DOI. unpaywalled version. references & citations. export record. Queueing Systems Volume 2: Computer Applications By Leonard Kleinrock In the early 60s queueing theory was found to be an effective tool for studying several performance parameters of computer systems. Since then, much of the queueing theory and computer applications literature has included analytical models for computer systems and computer networks. At present, queueing analysis of resource allocation and job flow through computer systems is one of the few tools available to computer scientists who wish to understand the behavior of the complex interconnections of their systems. Queueing Systems: Theory and Applications (QUESTA) is a well-established journal focusing on the theory of resource sharing in a wide sense, particularly within a network context. The journal is primarily interested in probabilistic and statistical problems in this setting. QUESTA welcomes both papers addressing these issues in the context of some application and papers developing mathematical methods for their analysis. Among the latter, one would particularly quote Markov chains and processes, stationary processes, random graphs, point processes, stochastic geometry, and related fields. The