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and-DeathQueueingSystems: Markovian Models; 4.1 Introduction; 4.2 Bulk Queues; 4.3 Queueing Models with Bulk (Batch) Service; 4.4 M/M (a,b)/1: Transient-State Distribution; 4.5 Two-Server Model: M/M(a,b) /2; 4.6 The M/M((l,b)/c Model; Problems and Complements; References and Further Reading; Chapter 5. Network of Queues; 5.1 Network of Markovian Queues; 5.2 Channels in Series or Tandem Queues
5.3 Jackson Network5.4 Closed Markovian Network (Gordon and Newell Network); 5.5 Cyclic Queue; 5.6 BCMP Networks; 5.7 Concluding Remarks; Problems and Complements; References and Further Reading; Chapter 6. Non-Markovian Queueing Systems; 6.1 Introduction; 6.2 Embedded-Markov-Chain Technique for the System with Poisson Input; 6.3 TheM/6/1 Model: Pollaczek-Khinchin Formula; 6.4 Busy Period; 6.5 Queues with Finite Input Source: M/G/l//M System; 6.6 System with Limited Waiting Space. M/G/l/K System; 6.7 The M+/G/l Model with Bulk Arrival; 6.8 The M/G(a,b)/l Model with General Bulk Service
6.9 The G/M/l Model6.10 Multiserver Model; 6.11 Queues with Markovian Arrival Process; Problems and Complements; References and Further Reading; Chapter 7. Queues with General Arrival Time and Service-Time Distributions; 7.1 The G/G/1 Queue with General Arrival Time and Service-Time Distributions; 7.2 Mean and Variance of Waiting Time tV; 7.3 Queues with Batch Arrivals G(X)/G/1; 7.4 The Output Process of a G /G / 1 System; 7.5 Some Bounds for the G/ G / 1 System; Problems and Complements; References and Further Reading; Chapter 8. Miscellaneous Topics
8.1 Heavy-Traffic Approximation for Waiting-Time Distribution

Sommario/riassunto

This is a graduate level textbook that covers the fundamental topics in queuing theory. The book has a broad coverage of methods to calculate important probabilities, and gives attention to proving the general theorems. It includes many recent topics, such as server-vacation models, diffusion approximations and optimal operating policies, and more about bulk-arrival and bull-service models than other general texts.* Current, clear and comprehensive coverage* A wealth of interesting and relevant examples and exercises to reinforce concepts* Reference lists provided after each c