Difference and Differential Equations with Applications in Queueing Theory
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DESCRIPTION

A Useful Guide to the Interrelated Areas of Differential Equations, Difference Equations, and Queueing Models

_Difference and Differential Equations with Applications in Queueing Theory_ presents the unique connections between the methods and applications of differential equations, difference equations, and Markovian queues. Featuring a comprehensive collection of topics that are used in stochastic processes, particularly in queueing theory, the book thoroughly discusses the relationship to systems of linear differential difference equations.

The book demonstrates the applicability that queueing theory has in a variety of fields including telecommunications, traffic engineering, computing, and the design of factories, shops, offices, and hospitals. Along with the needed prerequisite fundamentals in probability, statistics, and Laplace transform, _Difference and Differential Equations with Applications in Queueing Theory_ provides:

- A discussion on splitting, delayed-service, and delayed feedback for single-server, multiple-server, parallel, and series queue models
- Applications in queue models whose solutions require differential difference equations and generating function methods
- Exercises at the end of each chapter along with select answers
The book is an excellent resource for researchers and practitioners in applied mathematics, operations research, engineering, and industrial engineering, as well as a useful text for upper-undergraduate and graduate-level courses in applied mathematics, differential and difference equations, queueing theory, probability, and stochastic processes.

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