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2.8 Limits; 2.9 Comparing Systems using Sample Data; 2.10 Summary; References; Exercises; 3 MEASUREMENT/TESTING TECHNIQUE; 3.1 Measurement Strategies; 3.2 Event Tracing; 3.3 Monitors; 3.4 Program Optimizers; 3.5 Accounting Logs; 3.6 Summary; References; Exercises; 4 BENCHMARKING AND CAPACITY PLANNING; 4.1 Introduction; 4.2 Types of Benchmark Programs; 4.3 Benchmark Examples; 4.4 Frequent Mistakes and Games in Benchmarking; 4.5 Procedures of Capacity Planning and Related Main Problems; 4.6 Capacity Planning for Web Services
 4.7 SummaryReferences; Exercises; 5 DATA REPRESENTATION AND ADVANCED TOPICS ON VALIDATION MODELING; 5.1 Data Representation; 5.2 Measurements; 5.3 Program Profiling and Outlining; 5.4 State Machine Models; 5.5 Petri Net-Based Modeling; 5.6 Protocol Validation; 5.7 Summary; References; Exercises; 6 BASICS OF QUEUEING THEORY; 6.1 Queue Models; 6.2 Queue Parameters; 6.3 Little's Law; 6.4 Priority Management; 6.5 Analysis of M/M/1 Systems; 6.6 The M/M/M Queue; 6.7 Other Queues; 6.8 Queueing Models with Insensitive Length Distribution; 6.9 Summary; References; Exercises; 7 QUEUEING NETWORKS
 7.1 Fundamentals of Queueing Networks7.2 Model Inputs and Outputs in Queueing Networks; 7.3 Open Networks; 7.4 Closed Queueing Networks; 7.5 Product Form Networks; 7.6 Mean Value Analysis; 7.7 Analysis Using Flow Equivalent Servers; 7.8 Summary; References; Exercises; 8 OPERATIONAL AND MEAN VALUE ANALYSIS; 8.1 Operational Laws; 8.2 Little's Formula; 8.3 Bottleneck Analysis; 8.4 Standard MVA; 8.5 Approximation of MVA; 8.6 Bounding Analysis; 8.7 Case Study: A Circuit Switching System; 8.8 Summary; References; Exercises; 9 INTRODUCTION TO SIMULATION TECHNIQUE; 9.1 Introduction
 9.2 Types of Simulation9.3 Some Terminology; 9.4 Random-Number-Generation Techniques; 9.5 Survey of Commonly Used Random Number Generators; 9.6 Seed Selection; 9.7 Random Variate Generation; 9.8 Testing of Random Number Sequences; 9.9 Summary; References; Exercises; 10 COMMONLY USED DISTRIBUTIONS IN SIMULATION AND THEIR APPLICATIONS; 10.1 Exponential Distribution; 10.2 Poisson Distribution; 10.3 Uniform Distribution; 10.4 Normal Distribution; 10.5 Weibull Distribution; 10.6 Pareto Distribution; 10.7 Geometric Distribution; 10.8 Gamma distribution; 10.9 Erlang Distribution
 10.10 Beta Distribution

Sommario/riassunto

The only singular, all-encompassing textbook on state-of-the-art technical performance evaluation Fundamentals of Performance Evaluation of Computer and Telecommunication Systems uniquely presents all techniques of performance evaluation of computers systems, communication networks, and telecommunications in a balanced manner. Written by the renowned Professor Mohammad S. Obaidat and his coauthor Professor Nouredine Boudriga, it is also the only resource to treat computer and telecommunication systems as inseparable issues. The authors explain the basic concepts of performance evalua
