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<<(理论与算法)无线网络中的资源配置R>>

图书基本信息

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内容概要

The wireless industry is in the midst of a fundamental shift from providing voice-only services to offering customers an array of multimedia services, including a wide variety of audio, video and data communications capabilities. Future wireless networks will be integrated into every aspect of daily life, and therefore could affect our life in a magnitude similar to that of the Internet and cellular phones. This monograph demonstrates that these emerging applications and directions require fundamental understanding on how to design and control wireless networks that lies far beyond what the currently existing theory can provide. It is shown that mathematics is the key technology to cope with central technical problems in the design of wireless networks since the complexity of the problem simply precludes the use of engineering common sense alone to identify good solutions. The main objective of this book is to provide tools for better understanding the fundamental tradeoffs and interdependencies in wireless networks, with the goal of designing resource allocation strategies that exploit these interdependencies to achieve significant performance gains. The book consists of three largely independent parts: theory, applications and appendices. The latter contain foundational apects to make the book more understandable to readers who are not familiar with some basic concepts and results from linear algebra and convex analysis.

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书籍目录

List of SymbolsPart Ⅰ Theory 1 On the Perron Root of Irreducible Matrices 1.1 Some Basic Definitions 1.2 Some Bounds on the Perron Root and Their Applications 1.2.1 Concavity of the Perron Root on Some Subsets of Irreducible Matrices 1.2.2 Kullback-Leibler Divergence Characterization 1.2.3 Some Extended Perron Root Characterizations 1.2.4 Collatz-Wielandt-Type Characterization of the Perron Root 1.3 Convexity of the Perron Root 1.3.1 Some Definitions 1.3.2 Sufficient Conditions 1.3.3 Convexity of the Feasibility Set 1.3.4 Necessary Conditions 1.4 Special Classes of Matrices 1.4.1 Symmetric Matrices 1.4.2 Symmetric Positive Semidefinite Matrices 1.5 The Perron Root Under the Linear Mapping 1.5.1 Some Bounds 1.5.2 Disproof of the Conjecture 1.6 Some Remarks on Arbitrary Nonnegative Matrices 1.6.1 Log-Convexity of the Spectral Radius 1.6.2 Characterization of the Spectral Radius 1.6.3 Collatz Wielandt-Type Characterization of the Spectral Radius 1.7 Bibliograpical Notes 2 On the Positive Solution to a Linear System with Nonnegative Coefficients 2.1 Basic Concepts and Definitions 2.2 Feasibility Sets 2.3 Convexity Results 2.3.1 Log-Convexity of the Positive Solution 2.3.2 Convexity of the Feasibility Set 2.3.3 Strict Log-Convexity 2.3.4 Strict Convexity of the Feasibility Sets 2.4 The Linear CasePart II Applications and Algorithms 3 Introduction 4 Network Model 4.1 Basic Definitions 4.2 Medium Access Control 4.3 Wireless Communication Channel 4.3.1 Signal-to-Interference Ratio 4.3.2 Power Constraints 4.3.3 Data Rate Model 4.3.4 Two Examples 5 Resource Allocation Problem in Communications Networks 5.1 End-to-End Rate Control in Wired Networks 5.1.1 Fairness Criteria 5.1.2 Algorithms 5.2 Problem Formulation for Wireless Networks 5.2.1 Joint Power Control and Link Scheduling 5.2.2 Feasible Rate Region 5.2.3 End-to-End Window-Based Rate Control for Wireless Networks 5.2.4 MAC Layer Fair Rate Control for Wireless Networks. 5.2.5 Utility-Based Power Control 5.3 Interpretation in the QoS Domain 5.4 Remarks on Joint Power Control and Link Scheduling 5.4.1 Optimal Joint Power Control and Link Scheduling... 5.4.2 High SIR Regime 5.4.3 Low SIR Regime 5.4.4 Wireless Links with Self-Interference 5.5 Remarks on the Efficiency-Fairness Trade Off 5.5.1 Efficiency of the Max-Min Fair Power Allocation 5.5.2 Axiom-Based Interference ModelPart III AppendicesReference

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