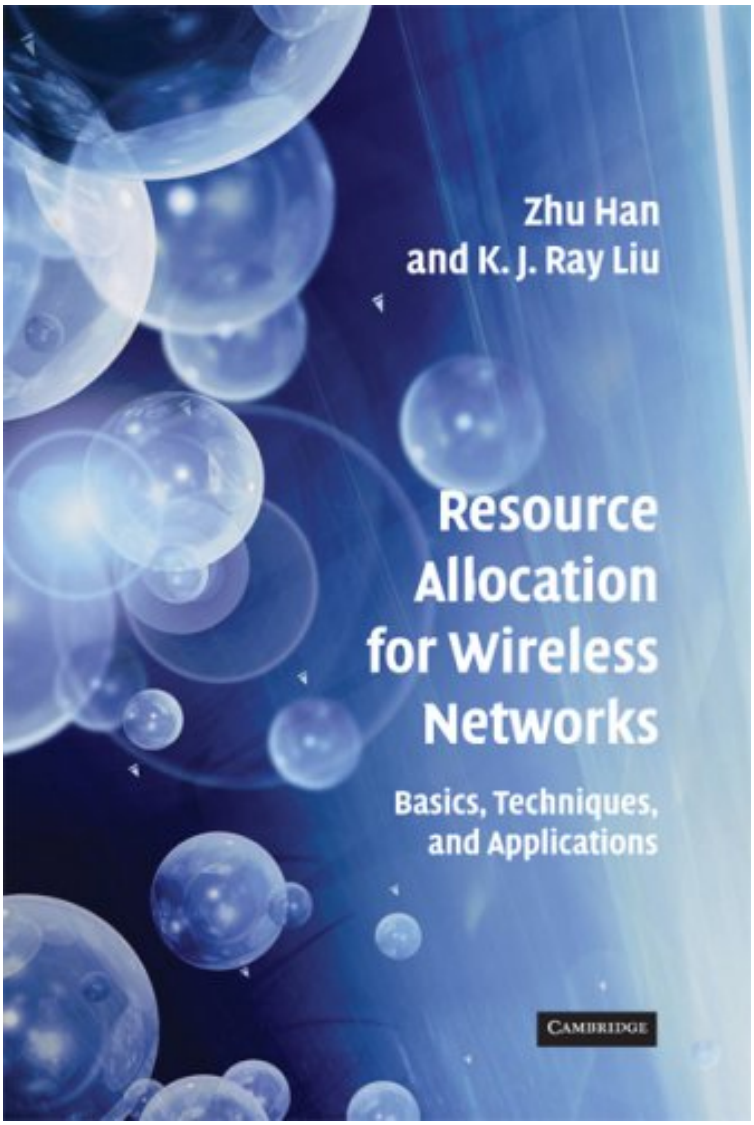
Resource Allocation for Wireless Networks: Basics, Techniques, and Applications

Zhu Han, K. J. Ray Liu
*ebooks | Download PDF | *ePub | DOC | audiobook*



#6317433 in Books 2008-09-01Format: Bargain PricePDF # 1 9.96 x 1.18 x 6.97l, #File Name: B007MXV7R8560 pages | File size: 35.Mb

Zhu Han, K. J. Ray Liu : Resource Allocation for Wireless Networks: Basics, Techniques, and Applications before purchasing it in order to gage whether or not it would be worth my time, and all praised Resource Allocation for Wireless Networks: Basics, Techniques, and Applications:

2 of 2 people found the following review helpful. Good overviewBy Prof WuZhaiThe book provides a good overview of resource allocation problems in wireless networks. The first part of the book introduces wireless systems and

corresponding terminologies. Then it discusses power, rate control and multi access mechanisms. These are effectively the 'control knobs' when optimizing resources. The authors then provide the basics of optimization, covering both linear and non linear optimization. They also touch upon ILPs and game theory. The last part gives specific resource allocation examples.The book is readable and provide a good high level introduction to the subject matter. However, the English in some chapters needs to be improved. The book is suitable for graduate students. This book is not much use for self-learning. More appropriate as a reference book.

Merging the fundamental principles of resource allocation with the state-of-the-art in research and application examples, Han and Liu present a novel and comprehensive perspective for improving wireless systems performance. Cross-layer multiuser optimization in wireless networks is described systematically. Starting from the basic principles, such as power control and multiple access, coverage moves to the optimization techniques for resource allocation, including formulation and analysis, and game theory. Advanced topics such as dynamic resource allocation and resource allocation in antenna array processing, and in cooperative, sensor, personal area, and ultrawideband networks, are then discussed. Unique in its scope, timeliness, and innovative author insights, this invaluable work will help graduate students and researchers to understand the basics of wireless resource allocation whilst highlighting modern research topics, and will help industrial engineers to improve system optimization.

About the AuthorZhu Han is currently an assistant professor in the Electrical and Computer Engineering Department at Boise State University, Idaho. In 2003, he was awarded his Ph.D. in electrical engineering from the University of Maryland, College Park. Zhu Han has also worked for a period in industry, as an R D Engineer for JDSD. Dr Han is PHY/MAC Symposium vice chair of IEEE Wireless Communications and Networking Conference, 2008.K. J. Ray Liu is Professor and Associate Chair for Graduate Studies and Research of Electrical and Computer Engineering Department at the University of Maryland, College Park. Dr Liu is the recipient of numerous honors and awards, including best paper awards from IEEE Signal Processing Society (twice), IEEE Vehicular Technology Society, and EURASIP, as well as recognition from University of Maryland, including the university-level Distinguished Scholar-Teacher Award, Invention of the Year Award, and college-level Poole and Kent Company Senior Faculty Teaching Award.