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Cellular Network Planning

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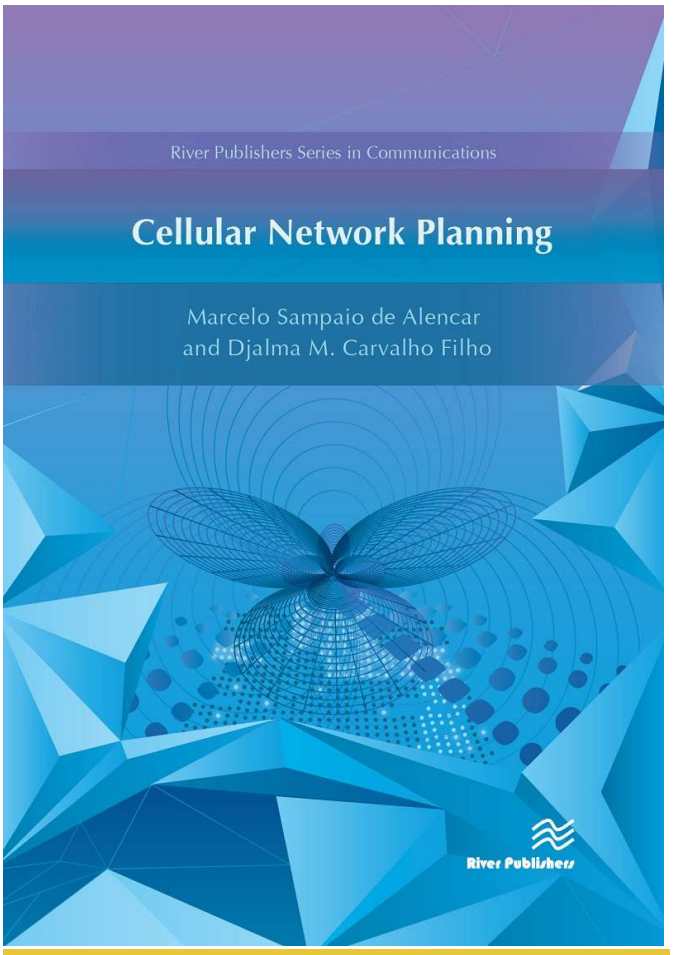
Over the recent years, few books have been published covering all the subjects needed to understand the very fundamental concepts of cell planning. Most books which deal with this topic are destined to very specific audiences, and the vast majority introduce the subject at a very basic, or technical, level, or are destined to an academic audience.

Cellular Network Planning begins with an introduction to the subject, covering conventional and contemporary wireless systems. Spectral allocation and the frequency plan are discussed, along with the essential characteristics of wireless systems. The design of mobile cellular systems includes cell planning, traffic and channel problems.

The book presents a review of existing models, considering both green field dimensioning and network expansion strategies, and discusses multi-objective optimization and base station deployment based on artificial immune systems. It also discusses a cost-effective base station deployment approach based on artificial immune systems, and introduces the modified MO-AIS algorithm.

Technical topics discussed in the book include:

- Mobile Cellular Network Basics
- Evolution of Mobile Cellular System
- The Mobile Communications Channel
- Propagation Models
- Cell Planning
- Green Field Dimensioning
- Network Expansion
- Cost-effective Planning Strategies



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Mobile Cellular Network Basics; Cell planning strategies; Model to estimate costs; Cell dimensioning; Green field planning; Network expansion

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