

**Nikookar, Hodayoun. *Wavelet Radio – Adaptive and Reconfigurable Wireless Systems Based on Wavelets*. New York, NY: Cambridge University Press, 2013, 198 pp. \$120.00 (Hardbound).**

The first book to provide a detailed discussion of the application of wavelets in wireless communications, this is an invaluable source of information for graduate students, researchers, and telecommunications engineers, managers and strategists. It surveys applications, explains how to design new wavelets, and compares wavelet technology with existing OFDM technology.

- Addresses the applications and challenges of wavelet technology for a range of wireless communication domains
- Aids in the understanding of wavelet packet modulation and compares it with OFDM
- Includes tutorials on convex optimisation and spectral factorisation for the design of wavelets
- Explains design methods for new wavelet technologies for wireless communications, addressing many challenges, such as peak-to-average power ratio reduction, interference mitigation, reduction of sensitivity to time, frequency and phase offsets, and efficient usage of wireless resources
- Describes the application of wavelet radio in spectrum sensing of cognitive radio systems.

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