Space-Time Block Coding for Wireless Communications
Erik G. Larsson and Petre Stoica

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Richard E. Blahut

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W. Cary Huffman and Vera Pless

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Introduction to Space-Time Wireless Communications

Arogyaswami Paulraj, Stanford University, California
Rohit Nabar, ETH Zentrum, Switzerland
and Dhananjay Gore, Stanford University, California

Space-time processing technology, which uses multiple antennas and sophisticated signal processing techniques, is a powerful new tool for improving system performance for wireless communications. The technology already features in the UMTS and CDMA2000 mobile standards.

This book is an accessible introduction to the theory of space-time wireless communications. The authors discuss the basics of space-time propagation, space-time channels, channel capacity, spatial diversity, and space-time coding. They highlight important tradeoffs in the design of practical systems and cover advanced topics such as space-time OFDM and spread-spectrum modulation, co-channel interference cancellation, and multiuser MIMO.

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