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Sommario/riassunto

Providing an all-encompassing self-contained treatment of Near-Capacity Multi-Functional MIMO Systems , the book starts by categorizing the family of Multiple-Input Multiple-Output (MIMO) schemes as diversity techniques, multiplexing schemes, multiple access arrangements and beam-forming techniques. Sophisticated coherent and low-complexity non-coherent MIMO receivers dispensing with channel estimation are considered in both classic and cooperation-aided scenarios. It is demonstrated that in the presence of correlated shadow-fading, cooperation-assisted systems may be expected to outperform their non-cooperative counterparts. The book contains a 100-page chapter on the unified treatment of all block codes in the context of high-flexibility, cutting-edge irregular Linear Dispersion Codes (LDC), which approach the MIMO-capacity. The majority of the book's solutions are in the optimum sphere-packing frame-work. . Sophisticated amalgam of five year's near-capacity MIMO research. Detailed examination of wireless landscape, including the fields of channel coding, spacetime coding and turbo detection techniques. Novel tool of Extrinsic Information Transfer Charts (EXIT) used to address recent developments. Material presented logically, allowing advanced readers to turn directly to any specific chapter of interest. One of the only books to cover these subjects, giving equal weighting to each.