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Nota di contenuto	PREFACE -- CONTRIBUTORS -- 1 MIMO Radar - Diversity Means Superiority (Jian Li and Petre Stoica) -- 1.1 Introduction -- 1.2 Problem Formulation -- 1.3 Parameter Identifiability -- 1.4 Nonparametric Adaptive Techniques for Parameter Estimation -- 1.5 Parametric Techniques for Parameter Estimation -- 1.6 Transmit Beampattern Designs -- 1.7 Conclusions -- Appendix 1A Generalized Likelihood Ratio Test -- Appendix 1B Lemma and Proof -- Acknowledgments -- References -- 2 MIMO Radar: Concepts, Performance Enhancements, and Applications (Keith W. Forsythe and Daniel W. Bliss) -- 2.1 Introduction -- 2.2 Notation -- 2.3 MIMO Radar Virtual Aperture -- 2.4 MIMO Radar in Clutter-Free Environments -- 2.5 Optimality of MIMO Radar for Detection -- 2.6 MIMO Radar with Moving Targets in Clutter: GMTI Radars -- 2.7 Summary -- Appendix 2A A Localization Principle -- Appendix 2B Bounds on $R(N)$ -- Appendix 2C An Operator Norm Inequality -- Appendix 2D Negligible Terms -- Appendix 2E Bound on Eigenvalues -- Appendix 2F Some Inner Products -- Appendix 2G An Invariant Inner Product -- Appendix 2H Kronecker and Tensor

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Sommario/riassunto

The first book to present a systematic and coherent picture of MIMO radars. Due to its potential to improve target detection and discrimination capability, Multiple-Input and Multiple-Output (MIMO) radar has generated significant attention and widespread interest in academia, industry, government labs, and funding agencies. This important new work fills the need for a comprehensive treatment of this emerging field. Edited and authored by leading researchers in the field of MIMO radar research, this book introduces recent developments in the area of MIMO radar to stimulate new concepts, theories, and applications of the topic, and to foster further cross-fertilization of ideas with MIMO communications. Topical coverage includes: . Adaptive MIMO radar. Beam pattern analysis and optimization for MIMO radar.

MIMO radar for target detection, parameter estimation, tracking, association, and recognition. MIMO radar prototypes and measurements. Space-time codes for MIMO radar. Statistical MIMO radar. Waveform design for MIMO radar Written in an easy-to-follow tutorial style, MIMO Radar Signal Processing serves as an excellent course book for graduate students and a valuable reference for researchers in academia and industry
