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Nota di contenuto	Preface -- 1. The Adaptive Inverse Control Concept -- 2. Wiener Filters -- 3. Adaptive LMS Filters -- 4. Adaptive Modeling -- 5. Inverse Plant Modeling -- 6. Adaptive Inverse Control -- 7. Other Configurations for Adaptive Inverse Control -- 8. Plant Disturbance Canceling -- 9. System Integration -- 10. Multiple-Input Multiple-Output (MIMO) Adaptive Inverse Control Systems -- 11. Nonlinear Adaptive Inverse Control -- 12. Pleasant Surprises -- A Stability and Misadjustment of the LMS Adaptive Filter -- B Comparative Analyses of Dither Modeling Schemes A, B, C -- C A Comparison of the Self-Tuning Regulator of Astrom and Wittenmark with the Techniques of Adaptive Inverse

Control -- D Adaptive Inverse Control for Unstable Linear SISO Plants
-- E Orthogonalizing Adaptive Algorithms: RLS, DFT/LMS, and
DCT/LMS -- F A MIMO Application: An Adaptive Noise-Canceling
System Used for Beam Control at the Stanford Linear Accelerator Center
-- G Thirty Years of Adaptive Neural Networks: Perceptron Madaline,
and Backpropagation -- H Neural Control Systems -- Glossary --
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Sommario/riassunto

A self-contained introduction to adaptive inverse control Now featuring a revised preface that emphasizes the coverage of both control systems and signal processing, this reissued edition of Adaptive Inverse Control takes a novel approach that is not available in any other book. Written by two pioneers in the field, Adaptive Inverse Control presents methods of adaptive signal processing that are borrowed from the field of digital signal processing to solve problems in dynamic systems control. This unique approach allows engineers in both fields to share tools and techniques. Clearly and intuitively written, Adaptive Inverse Control illuminates theory with an emphasis on practical applications and commonsense understanding. It covers: the adaptive inverse control concept; Weiner filters; adaptive LMS filters; adaptive modeling; inverse plant modeling; adaptive inverse control; other configurations for adaptive inverse control; plant disturbance canceling; system integration; Multiple-Input Multiple-Output (MIMO) adaptive inverse control systems; nonlinear adaptive inverse control systems; and more. Complete with a glossary, an index, and chapter summaries that consolidate the information presented, Adaptive Inverse Control is appropriate as a textbook for advanced undergraduate- and graduate-level courses on adaptive control and also serves as a valuable resource for practitioners in the fields of control systems and signal processing.
