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Nota di contenuto	Title Page; Contents; Preface; Notation; Acronyms; Chapter 1. Introduction to PtNLMS Algorithms; 1.1. Applications motivating PtNLMS algorithms; 1.2. Historical review of existing PtNLMS algorithms; 1.3. Unified framework for representing PtNLMS algorithms; 1.4. Proportionate-type NLMS adaptive filtering algorithms; 1.4.1. Proportionate-type least mean square algorithm; 1.4.2. PNLMS algorithm; 1.4.3. PNLMS++ algorithm; 1.4.4. IPNLMS algorithm; 1.4.5. IIPNLMS algorithm; 1.4.6. IAF-PNLMS algorithm; 1.4.7. MPNLMS algorithm; 1.4.8. EPNLMS algorithm; 1.5. Summary Chapter 2. LMS Analysis Techniques2.1. LMS analysis based on small adaptation step-size; 2.1.1. Statistical LMS theory: small step-size assumptions; 2.1.2. LMS analysis using stochastic difference equations with constant coefficients; 2.2. LMS analysis based on independent input signal assumptions; 2.2.1. Statistical LMS theory: independent input signal assumptions; 2.2.2. LMS analysis using stochastic difference equations with stochastic coefficients; 2.3. Performance of statistical LMS theory; 2.4. Summary; 3. PtNLMS Analysis Techniques

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#### Sommario/riassunto

The topic of this book is proportionate-type normalized least mean squares (PtNLMS) adaptive filtering algorithms, which attempt to estimate an unknown impulse response by adaptively giving gains proportionate to an estimate of the impulse response and the current measured error. These algorithms offer low computational complexity and fast convergence times for sparse impulse responses in network and acoustic echo cancellation applications. New PtNLMS algorithms are developed by choosing gains that optimize user-defined criteria, such as mean square error, at all times. PtNLMS algorithms ar

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