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Nota di contenuto	Introduction -- Discrete-Time Sliding Mode Control -- Discrete-Time Periodic Adaptive Control -- Discrete-Time Adaptive Posicast Control -- Discrete-Time Iterative Learning Control -- Discrete-Time Fuzzy PID Control -- Benchmark Precision Control of a Piezo-Motor Driven Linear Stage -- Advanced Control for Practical Engineering Applications.
Sommario/riassunto	This book covers a wide spectrum of systems such as linear and nonlinear multivariable systems as well as control problems such as disturbance, uncertainty and time-delays. The purpose of this book is to provide researchers and practitioners a manual for the design and application of advanced discrete-time controllers. The book presents six different control approaches depending on the type of system and control problem. The first and second approaches are based on Sliding Mode control (SMC) theory and are intended for linear systems with

exogenous disturbances. The third and fourth approaches are based on adaptive control theory and are aimed at linear/nonlinear systems with periodically varying parametric uncertainty or systems with input delay. The fifth approach is based on Iterative learning control (ILC) theory and is aimed at uncertain linear/nonlinear systems with repeatable tasks and the final approach is based on fuzzy logic control (FLC) and is intended for highly uncertain systems with heuristic control knowledge. Detailed numerical examples are provided in each chapter to illustrate the design procedure for each control method. A number of practical control applications are also presented to show the problem solving process and effectiveness with the advanced discrete-time control approaches introduced in this book.