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Sommario/riassunto	Data-Driven, Nonparametric, Adaptive Control Theory introduces a novel approach to the control of deterministic, nonlinear ordinary differential equations affected by uncertainties. The methods proposed enforce satisfactory trajectory tracking despite functional uncertainties in the plant model. The book employs the properties of reproducing kernel Hilbert (native) spaces to characterize both the functional space of uncertainties and the controller's performance. Classical control systems are extended to broader classes of problems and more informative characterizations of the controllers’ performances are attained. Following an examination of how backstepping control and

robust control Lyapunov functions can be ported to the native setting, numerous extensions of the model reference adaptive control framework are considered. The authors' approach breaks away from classical paradigms in which uncertain nonlinearities are parameterized using a regressor vector provided a priori or reconstructed online. The problem of distributing the kernel functions that characterize the native space is addressed at length by employing data-driven methods in deterministic and stochastic settings. The first part of this book is a self-contained resource, systematically presenting elements of real analysis, functional analysis, and native space theory. The second part is an exposition of the theory of nonparametric control systems design. The text may be used as a self-study book for researchers and practitioners and as a reference for graduate courses in advanced control systems design. MATLAB® codes, available on the authors' website, and suggestions for homework assignments help readers appreciate the implementation of the theoretical results.