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Altri autori (Persone)	GrüneLars HaunschmiedJosef TraglerGernot
Disciplina	629.8
Soggetti	Econometrics Operations research Social sciences - Mathematics Stochastic processes Automatic control Quantitative Economics Operations Research and Decision Theory Mathematics in Business, Economics and Finance Stochastic Systems and Control Control and Systems Theory
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Nota di contenuto	Chapter 1. Multi-horizon MPC and Its Application to the Integrated Power and Thermal Management of Electric Vehicles (Qiu hao Hu) -- Chapter 2. Data/Moment-Driven Approaches for Fast Predictive Control of Collective Dynamics (Giacomo Albi) -- Chapter 3. Finite-Dimensional Receding Horizon Control of Linear Time-Varying Parabolic PDEs: Stability Analysis and Model-Order Reduction (Behzad Azmi) -- Chapter 4. Solving Hybrid Model Predictive Control Problems via a Mixed-Integer Approach (Iman Nadozi) -- Chapter 5. nMPyC – A Python Package for Solving Optimal Control Problems via Model Predictive Control (Jonas Schießl) -- Chapter 6. Controllability of Continuous Networks and

aKernel-Based Learning Approximation (Michael Herty) -- Chapter 7. Economic Model Predictive Control as aSolution to Markov Decision Processes (Dirk Reinhardt) -- Chapter 8. Reinforcement Learning with Guarantees (Mario Zanon).

Sommario/riassunto

The book explores the field of model predictive control (MPC). It reports on the latest developments in MPC, current applications, and presents various subfields of MPC. The book features topics such as uncertain and stochastic MPC variants, learning and neural network approaches, easy-to-use numerical implementations as well as multi-agent systems and scheduling and coordination tasks. While MPC is rooted in engineering science, this book illustrates the potential of using MPC theory and methods in non-engineering sciences and applications such as economics, finance, and environmental sciences.
