1. **Record Nr.** UNISALENTO991001417329707536
   Autore Petit, Pierre
   Titolo Verdi / Pierre Petit
   Pubbl/distr/stampa Paris : Ed. du Seuil, 1978
   Descrizione fisica 186 p. : ill. ; 18 cm
   Collana Collections microcosme. Solfèges

   Lingua di pubblicazione Francese
   Formato Materiale a stampa
   Livello bibliografico Monografia

2. **Record Nr.** UNINA9911007363203321
   Titolo Control Systems Benchmarks / / edited by José M. Maestre, Carlos Ocampo-Martinez
   Pubbl/distr/stampa Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
   ISBN 3-031-76312-2
   Edizione [1st ed. 2025.]
   Descrizione fisica 1 online resource (XXIII, 219 p. 84 illus., 76 illus. in color.)
   Collana Advances in Industrial Control, , 2193-1577

   Disciplina 629.8
   Soggetti Automatic control
   Robotics
   Automation
   System theory
   Control theory
   Mathematical optimization
   Computer simulation
   Control, Robotics, Automation
   Systems Theory, Control
   Optimization
   Computer Modelling

   Lingua di pubblicazione Inglese
   Formato Materiale a stampa
   Livello bibliografico Monografia

Nota di contenuto

Chapter 1. A collection of benchmarks for control engineers -- Part 1. Processes -- Chapter 2. A benchmark for the application of distributed control techniques to the electricity network of the European economic area -- Chapter 3. Agroconnect research station: General description and control challenges -- Chapter 4. Temperature control of a shrink tunnel with multiple heating zones -- Chapter 5. A model for gas humidification in a fuel-cell assembly -- Chapter 6. A benchmark for plant-wide optimization and control of activated sludge wastewater treatment plants -- Chapter 7. On a benchmark problem for automated insulin delivery in type-1 diabetes -- Chapter 8. Advances in run-to-fail ball bearing testbench: Bridging the gap in predictive maintenance -- Part II. Robots and Vehicles -- Chapter 9. Fault-tolerant control of a quadrotor based on a nonlinear model -- Chapter 10. A benchmark on formation control of Multi-Agent Robotic System -- Chapter 11. Digital twin and scaled prototype: Open low-cost benchmarks for mobile robotics -- Chapter 12. Benchmarking handling performance in 4WD electric vehicles through advanced control techniques -- Chapter 13. Benchmark problem for visual nudge: Light-guided control of human driven vehicles.

Sommario/riassunto

Control Systems Benchmarks helps control engineers, researchers, and students to evaluate and compare control system performance across a range of critical applications by offering a collection of real-world benchmarks. The book brings together challenges from diverse fields like power grids, robotics, automotive systems, and industrial processes, giving readers practical tools to test their control methods in realistic settings. Organized into two blocks, the book first tackles process control, covering dynamic and large-scale problems such as load-frequency control in power grids and wastewater-treatment-plant automation. The second block explores robotics and vehicles, focusing on areas like fault-tolerant control of quadrotors and lateral stability in electric vehicles. Each benchmark presents complex engineering challenges, allowing readers to experiment with various control approaches. This book is set apart by the consistent structure of its chapters, which enables readers to adapt benchmarks for their own systems easily. Each chapter includes: a brief overview of the benchmark, highlighting its significance and technical hurdles; a detailed problem description, including engineering goals and constraints; experimental setup, performance metrics, and data collection methods; downloadable materials and instructions for running simulations or accessing physical platforms; and a discussion of existing solutions, case studies, and open challenges to inspire further research. Whether you're a practitioner, an academic researcher, or a student eager to deepen your understanding of control systems, Control Systems Benchmarks offers practical insights and valuable resources to advance your work.