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4A: Understanding Delay in Digital Control; 4.4Selecting the Sample Time; 4.5 Questions
Chapter 5 - The z-Domain5.1Introduction to the z-Domain; 5.2z Phasors; 5.3Aliasing; 5.4Experiment 5A: Aliasing; 5.5From Transfer Function to Algorithm; 5.6Functions for Digital Systems; 5.7Reducing the Calculation Delay; 5.8Quantization; 5.9. Questions; Chapter 6 - Four Types of Controllers; 6.1Tuning in this Chapter; 6.2Using the Proportional Gain; 6.3Using the Integral Gain; 6.4Using the Differential Gain; 6.5PD Control; 6.6Choosing the Controller; 6.7Experiments 6A-6D; 6.8 Questions; Chapter 7 - Disturbance Response; 7.1 Disturbances; 7.2Disturbance Response of a Velocity Controller 7.3Disturbance Decoupling7.4 Questions; Chapter 8 - Feed-Forward; 8.1Plant-Based Feed-Forward; 8.2Feed-Forward and the Power Converter; 8.3Delaying the Command Signal; 8.4Variation in Plant and Power Converter Operation; 8.5Feed-Forward for the Double-Integrating Plant; 8.6 Questions; Chapter 9 - Filters in Control Systems; 9.1Filters in Control Systems; 9.2Filter Passband; 9.3Implementation of Filters; 9.4 Questions; Chapter 10 - Introduction to Observers in Control Systems; 10.1Overview of Observers; 10.2Experiments 10A-10C: Enhancing Stability with an Observer
10.3Filter Form of the Luenberger Observer10.4Designing a Luenberger Observer; 10.5Introduction to Tuning an Observer Compensator; 10.6 Questions; Section II - Modeling; Chapter 11 - Introduction to Modeling; 11.1What is a Model?; 11.2Frequency-Domain Modeling; 11.3Time-Domain Modeling; 11.4Questions; Chapter 12 - Nonlinear Behavior and Time Variation; 12.1LTI Versus Non-LTI; 12.2Non-LTI Behavior; 12.3Dealing with Nonlinear Behavior; 12.4Ten Examples of Nonlinear Behavior; 12.5 Questions; Chapter 13 - Model Development and Verification; 13.1Seven-Step Process to Develop a Model 13.2From Simulation to Deployment: RCP and HIL

Sommario/riassunto

Control Systems Design Guide has helped thousands of engineers to improve machine performance. This fourth edition of the practical guide has been updated with cutting-edge control design scenarios, models and simulations enabling apps from battlebots to solar collectors. This useful reference enhances coverage of practical applications via the inclusion of new control system models, troubleshooting tips, and expanded coverage of complex systems requirements, such as increased speed, precision and remote capabilities, bridging the gap between the complex, math-heavy control theory ta

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Nota di contenuto	Technical Correctness of Sprayer Nozzles for Pesticides Application in Bosnia and Herzegovina -- Determination of Water Extractable Chloride in the Greenhouse Soil and Minimizing Interferences Caused by the Presence of the Iron Ions -- Detection of Blueberry Latent Virus on Highbush Blueberries in Montenegro -- Leaf Diseases of Wild Barley (Hordeum spontaneum) in Bingöl University Campus, Turkey -- The Effect of Biofertilization on Potato Yield Components -- Effects of

	Mulching and Irrigation on Antioxidant Activity and Antimicrobial Properties of Basil (Ocimum basilicum L.) -- Impact of Climate Change on the Soil Water Balance Components in the Area of Sanski Most (Bosnia and Herzegovina).
Sommario/riassunto	This book gathers the proceedings of the 32nd Scientific-Experts Conference of Agriculture and Food Industry, held on December 1-2, 2022, in Sarajevo, Bosnia and Herzegovina. It reports on the application of molecular, nano- and engineering technologies for food sciences, and plant and animal production. It discusses important agricultural economics and social and environmental issues, proposings some answers to current and future challenges. The chapters reflect the special focus of this conference edition, which was on discussing strategies for developing a more resilient and sustainable agrifood systems. Offering a timely snapshot of cutting-edge and multidisciplinary research and methods, this book addresses researchers, professionals, and stakeholders in the broad field of agriculture and food sciences, biotechnology, and bio- and nanoengineering. .