Control Systems Engineering, 7th Edition
Norman S. Nise

DESCRIPTION

Control Systems Engineering, 7th Edition has become the top selling text for this course. It takes a practical approach, presenting clear and complete explanations. Real world examples demonstrate the analysis and design process, while helpful skill assessment exercises, numerous in-chapter examples, review questions and problems reinforce key concepts. A new progressive problem, a solar energy parabolic trough collector, is featured at the end of each chapter. This edition also includes Hardware Interface Laboratory experiments for use on the MyDAQ platform from National Instruments. A tutorial for MyDAQ is included as Appendix D.

ABOUT THE AUTHOR

Norman S. Nise teaches in the Electrical and Computer Engineering Department at California State Polytechnic University, Pomona. In addition to being the author of Control Systems Engineering, Professor Nise has contributed to the CRC publications The Engineering Handbook, The Control Handbook, and The Electrical Engineering Handbook.
NEW TO EDITION

• 20% new end-of-chapter problems that highlight biomedical, robotics, or other engineering applications, including a new progressive analysis and design problem – a solar energy parabolic trough collector.

• Greater emphasis on computer-aided analysis and design, including MATLAB®, LabVIEW®, and Simulink®. Simulink® has been updated to Simulink 8.1 and a new section has been added: Using Simulink for control system design.

• Hardware Interface Laboratory experiments have been added to certain chapters. These experiments use National Instrument’s myDAQ® to interface your computer to actual hardware to test control system principles in the real-world.

FEATURES

• Accessibly written. Nise is noted for his clear writing and accessible presentation.

• Design Emphasis. Students are encouraged to go beyond a plug-and-chug approach through the use of design problems, progressive analysis and design problems, and examples and problems related to the case studies.

• Real-world case studies. The case studies (an autonomous submersible vehicle and an antenna position control system) are built up gradually throughout the chapters to demonstrate the analysis and design process.

• Strong learning-by-example pedagogical approach. Skill-assessment exercises demonstrate step-by-step techniques to solve most problems; cyber exploration labs show how to apply popular software tools (MATLAB®, LabVIEW®, and Simulink) to control engineering problems.
• **Clearly ties mathematics to physical reality.** Students can comprehend how theoretical concepts connect to actual system dynamics.

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