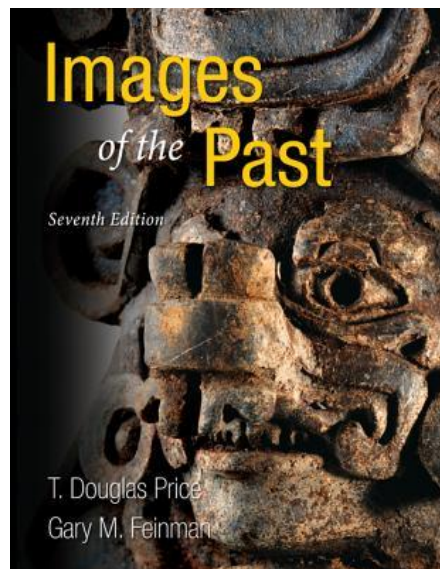




Fuzzy Control and Modeling: Analytical Foundations and Applications

Hao Ying

Download now

Read Online ➔

Fuzzy Control and Modeling: Analytical Foundations and Applications

Hao Ying

Fuzzy Control and Modeling: Analytical Foundations and Applications Hao Ying

"The emerging, powerful fuzzy control paradigm has led to the worldwide success of countless commercial products and real-world applications. Fuzzy control is exceptionally practical and cost-effective due to its unique ability to accomplish tasks without knowing the mathematical model of the system, even if it is nonlinear, time varying and complex. Nevertheless, compared with the conventional control technology, most fuzzy control applications are developed in an ad hoc manner with little analytical understanding and without rigorous system analysis and design.

Fuzzy Control and Modeling is the only book that establishes the analytical foundations for fuzzy control and modeling in relation to the conventional linear and nonlinear theories of control and systems. The coverage is up-to-date, comprehensive, in-depth and rigorous. Numeric examples and applications illustrate the utility of the theoretical development. In the forward to Fuzzy Control and Modeling, Professor Lotfi Zadeh, the founder of fuzzy logic, declares:

"Professor Yings book contains much that is new, important and detailed... . His linkage of basic theory to real-world applications is very impressive... . The last chapter in the book deals with a subject in which Professor Ying is a foremost authority, namely, application of fuzzy control to biomedical systems.... Professor Yings work should go a long way toward countering the view that fuzzy control is a collection of applications without a solid theory. The deep theory of fuzzy control developed by Professor Ying is of great importance both as a theory and as a foundation for major advances in applications of fuzzy control in industry, biomedicine, and other fields."

Important topics discussed include:

Structures of fuzzy controllers/models with respect to conventional fuzzy controllers/models
Analysis of fuzzy control and modeling in relation to their classical counterparts
Stability analysis of fuzzy systems and design of fuzzy control systems
Sufficient and necessary conditions on fuzzy systems as universal approximators
Real-time fuzzy control systems for treatment of life-critical problems in biomedicine

Fuzzy Control and Modeling is a self-contained, invaluable resource for professionals and students in diverse technical fields who aspire to analytically study fuzzy control and modeling.

About the Author

Hao Ying left the faculty of University of Texas Medical Branch in 2000, and is currently an associate professor in the Department of Electrical Engineering at Wayne State University. He began fuzzy control research in 1981. In 1987, Dr. Ying established the worlds first analytical connection between a fuzzy controller and a conventional controller. In 1989, he developed the worlds first clinical fuzzy control application – real-time control of blood pressure. Dr. Ying has been making systematic contributions to analytical issues fundamental to fuzzy control and systems ever since."

Sponsored by:

IEEE Engineering in Medicine and Biology Society.

Fuzzy Control and Modeling: Analytical Foundations and Applications Details

Date : Published by IEEE Computer Society Press

ISBN : 9780078034978

Author : Hao Ying

Format : Hardcover 352 pages

Genre :

 [Download Fuzzy Control and Modeling: Analytical Foundations and ...pdf](#)

 [Read Online Fuzzy Control and Modeling: Analytical Foundations an ...pdf](#)

Download and Read Free Online Fuzzy Control and Modeling: Analytical Foundations and Applications Hao Ying

From Reader Review Fuzzy Control and Modeling: Analytical Foundations and Applications for online ebook

Fuzzy Control and Modeling: Analytical Foundations and Applications Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Fuzzy Control and Modeling: Analytical Foundations and Applications Hao Ying books to read online.