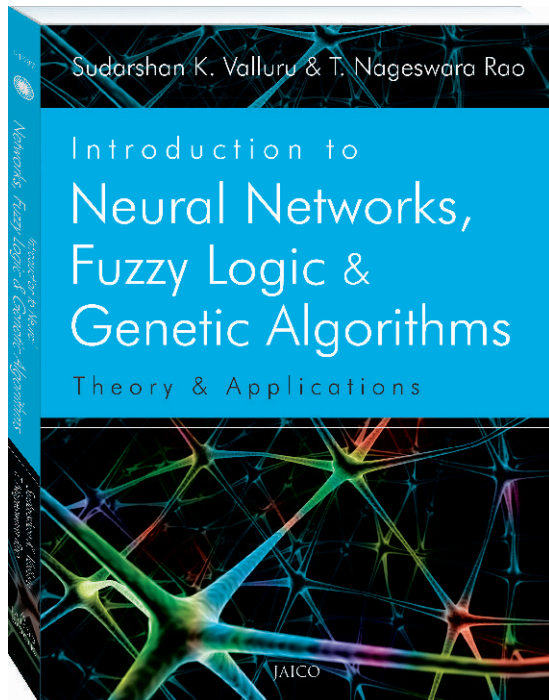


INTRODUCTION TO NEURAL NETWORKS, FUZZY LOGIC & GENETIC ALGORITHMS

Theory & Applications

Sudarshan K. Valluru & T. Nageswara Rao



This textbook explains Neural Networks, Fuzzy Logic and Genetic Algorithms from a unified engineering perspective. It combines the three techniques to minimize their weaknesses and enhance their strengths. The authors have discussed the fundamental ideas and practical methods of the three techniques by using numerous examples. The book will be an ideal text for the students of Computer Science, Information Technology, Electrical and Electronics & Communication Engineering, studying Soft Computing at the undergraduate level.

Sudarshan K. Valluru is an Assistant Professor in the Department of Electrical Engineering at Delhi College of Engineering, New Delhi. He obtained his B.Tech (E&EE) degree from Nagarjuna University and completed his postgraduate studies (M.Tech) in "Computer Applications in Industrial Drives" from National Institute of Engineering, Mysore.

T. Nageswara Rao is a Professor in the Department of Computer Science & Engineering at Nalanda Institute of Engineering and Technology, Guntur. He has done M.Sc. in Applied Mathematics and M.Tech in Computer Science & Engineering from Nagarjuna University and finally completed his M.Phil, from Madurai Kamaraj University.

KEY FEATURES

- Provides an excellent, but lucid introduction to Neural Networks and Artificial Neural Networks
- Provides simple approach to knowledge-based systems for problem solving by combining methods of Neural Networks, Fuzzy Systems and Genetic Algorithms
- Emphasizes on presenting detailed description of these techniques as required, to make the book self-contained

CONTENTS

1. Introduction to Neural Networks
2. Essentials of Artificial Neural Networks
3. Single Layer Feed-Forward Neural Networks
4. Multilayer Feed Forward Neural Networks
5. Associative Memories
6. Classical and Fuzzy Sets
7. Fuzzy Logic System Components
8. Applications of ANNs and Fuzzy Logic
9. Non-Traditional Optimized Algorithms-Genetic Algorithm