Título: Fusion Of Neural Networks, Fuzzy Systems And Genetic Algorithms: Industrial Appl

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Artificial neural networks can mimic the biological information-processing mechanism in - a very limited sense. Fuzzy logic provides a basis for representing uncertain and imprecise knowledge and forms a basis for human reasoning. Neural networks display genuine promise in solving problems, but a definitive theoretical basis does not yet exist for their design.

Fusion of Neural Networks, Fuzzy Systems and Genetic Algorithms integrates neural net, fuzzy system, and evolutionary computing in system design that enables its readers to handle complexity - offsetting the demerits of one paradigm by the merits of another.

This book presents specific projects where fusion techniques have been applied. The chapters start with the design of a new fuzzy-neural controller. Remaining chapters discuss the application of expert systems, neural networks, fuzzy control, and evolutionary computing techniques in modern engineering systems. These specific applications include:

direct frequency converters

electro-hydraulic systems

motor control

toaster control

speech recognition

vehicle routing

fault diagnosis

Asynchronous Transfer Mode (ATM) communications networks

telephones for hard-of-hearing people

control of gas turbine aero-engines

telecommunications systems design

Fusion of Neural Networks, Fuzzy Systems and Genetic Algorithms covers the spectrum of applications - comprehensively demonstrating the advantages of fusion techniques in industrial applications.