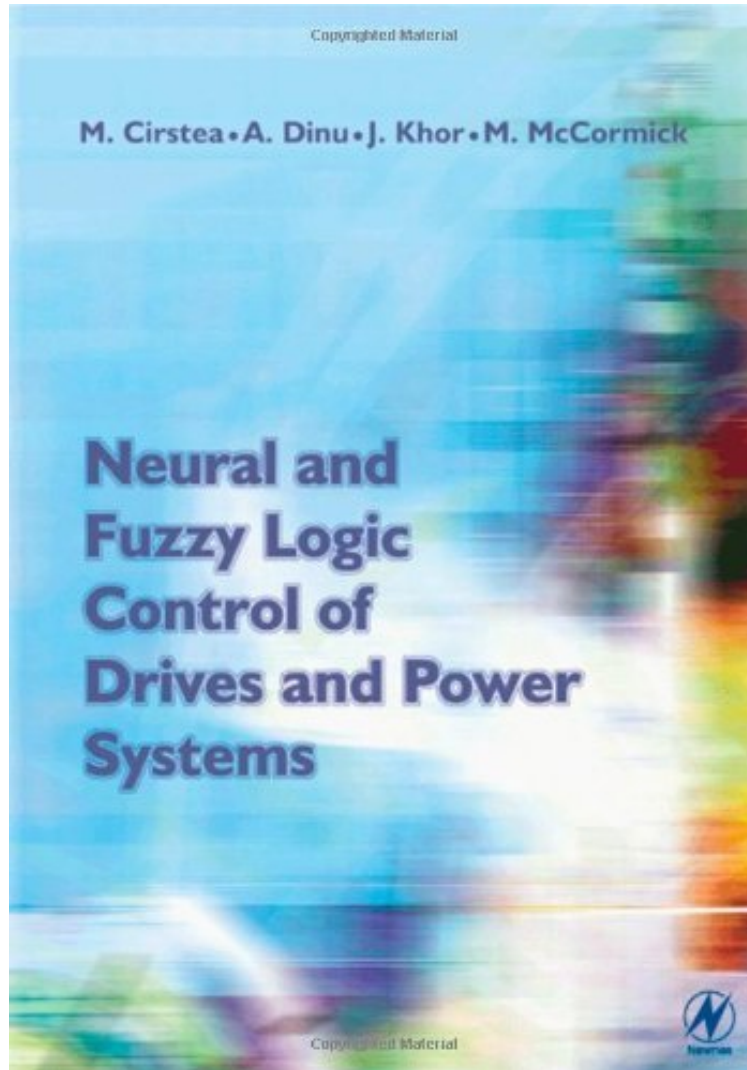


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# Neural and Fuzzy Logic Control of Drives and Power Systems

*Marcian Cirstea, Andrei Dinu, Malcolm McCormick, Jeen Ghee Khor*  
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Introducing cutting edge control systems through real-world applications. Neural networks and fuzzy logic based systems offer a modern control solution to AC machines used in variable speed drives, enabling industry to save costs and increase efficiency by replacing expensive and high-maintenance DC motor systems. The use of fast micros has revolutionised the field with sensorless vector control and direct torque control. This book reflects recent research findings and acts as a useful guide to the new generation of control systems for a wide readership of advanced undergraduate and graduate students, as well as practising engineers. The authors guide readers quickly and concisely through the complex topics of neural networks, fuzzy logic, mathematical modelling of electrical machines, power systems control and VHDL design. Unlike the academic monographs that have previously been published on each of these subjects, this book combines them and is based round case studies of systems analysis, control strategies, design, simulation and implementation. The result is a guide to applied control systems design that will appeal equally to students and professional design engineers. The book can also be used as a unique VHDL design aid, based on real-world power engineering applications.

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