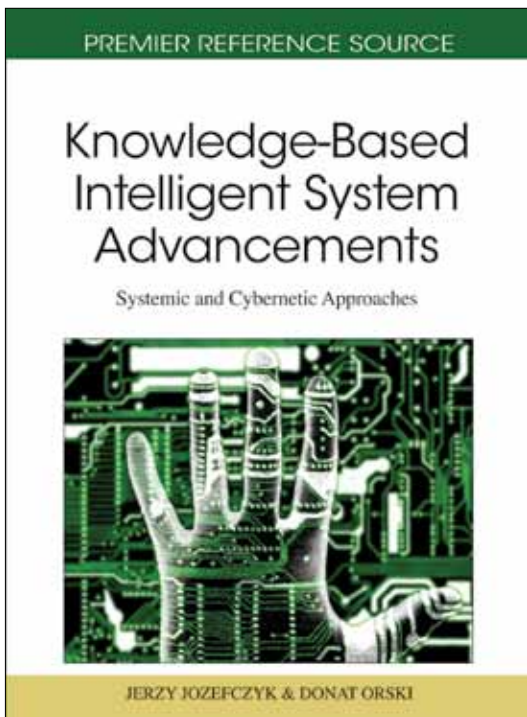


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Knowledge-Based Intelligent System Advancements: Systemic and Cybernetic Approaches



Jerzy Jozefczyk (Wroclaw University of Technology, Poland)
and Donat Orski (Wroclaw University of Technology, Poland)

The integration of artificial intelligence and knowledge based methods and technologies as well as computer based information systems has created the next generation of information systems – intelligent information systems. This connection enables these new information systems to demonstrate novel capabilities, in particular: supporting users in decision making, processing data, discovering and processing knowledge, and reasoning under uncertainty.

Knowledge-Based Intelligent System Advancements: Systemic and Cybernetic Approaches presents selected new AI-based ideas and methods for analysis and decision making in intelligent information systems derived using systemic and cybernetic approaches. This book is useful for researchers, practitioners and students interested intelligent information retrieval and processing, machine learning and adaptation, knowledge discovery, applications of fuzzy based methods and neural networks.

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Jerzy Józefczyk graduated in automatic control systems from the Wroclaw University of Technology, in 1980. He received the Ph.D. degree in computer science from the Poznan University of Technology, in 1987, and Dr. Sc. degree in automation and robotics from the Systems Research Institute of the Polish Academy of Sciences, Warsaw, in 1996. Presently, he is a full professor in the Wroclaw University of Technology, and a head of the Department of Intelligent Decision Making Systems. His research interests include operations research, complex control systems, uncertain systems and artificial intelligence which resulted in more than 100 publications. He was a Scientific Secretary of the Committee of Automation and Robotics of the Polish Academy of Sciences in 1988–2006 and a member of this Committee from 1988. He is currently a member of a Board of Directors of the World Organisation of Systems and Cybernetics.