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Nota di contenuto	Topological Theory of Fuzziness -- Topological Theory of Fuzziness -- Similarity Based System Reconfiguration by Fuzzy Classification and Hierarchical Interpolate Fuzzy Reasoning -- Similarity Based System Reconfiguration by Fuzzy Classification and Hierarchical Interpolate Fuzzy Reasoning -- A Fuzzy System for Fetal Heart Rate Assessment -- A Fuzzy System for Fetal Heart Rate Assessment -- Efficient Graph Coloring by Evolutionary Algorithms -- Efficient Graph Coloring by Evolutionary Algorithms -- Determination of Decision Rules on the Basis of Genetic Algorithms -- Determination of Decision Rules on the Basis of Genetic Algorithms -- Modeling a Refrigeration System Using Recurrent Neural Networks -- Modeling a Refrigeration System Using Recurrent Neural Networks -- Evaluating Nugget Sizes of Spot Welds by Using Artificial Neural Network -- Evaluating Nugget Sizes of Spot Welds by Using Artificial Neural Network -- Spotting Relevant Information in Extremely Large Document Collections -- Spotting Relevant Information in Extremely Large Document Collections -- Fuzzy Controller Generation with a Fuzzy Classification Method -- Fuzzy Controller Generation with a Fuzzy Classification Method --

Transformation and Optimization of Fuzzy Controllers Using Signal Processing Techniques -- Transformation and Optimization of Fuzzy Controllers Using Signal Processing Techniques -- Fuzzy-Control Design Tool for Low-Cost Microcontrollers (FHFC-Tool) -- Fuzzy-Control Design Tool for Low-Cost Microcontrollers (FHFC-Tool) -- Search of Optimal Error Correcting Codes with Genetic Algorithms -- Search of Optimal Error Correcting Codes with Genetic Algorithms -- An Unsupervised Clustering with Evolutionary Strategy to Estimate the Cluster Number -- An Unsupervised Clustering with Evolutionary Strategy to Estimate the Cluster Number -- Multi-objective Optimization in Evolutionary Algorithms Using Satisfiability Classes -- Multi-objective Optimization in Evolutionary Algorithms Using Satisfiability Classes -- Neural Network Approach to Design of Distributed Hard Real-Time Systems -- Neural Network Approach to Design of Distributed Hard Real-Time Systems -- Supporting Traditional Controllers of Combustion Engines by Means of Neural Networks -- Supporting Traditional Controllers of Combustion Engines by Means of Neural Networks -- Controlling Biological Wastewater Treatment Plants Using Fuzzy Control and Neural Networks -- Controlling Biological Wastewater Treatment Plants Using Fuzzy Control and Neural Networks -- A New Fuzzy Character Segmentation Algorithm for Persian / Arabic Typed Texts -- A New Fuzzy Character Segmentation Algorithm for Persian / Arabic Typed Texts -- RePART: A Modified Fuzzy ARTMAP for Pattern Recognition -- RePART: A Modified Fuzzy ARTMAP for Pattern Recognition -- An Adaptive C-Average Fuzzy Control Filter for Image Enhancement -- An Adaptive C-Average Fuzzy Control Filter for Image Enhancement -- Pareto-optimality in Scheduling Problems -- Pareto-optimality in Scheduling Problems -- Controlled Markov Chain Optimization of Genetic Algorithms -- Controlled Markov Chain Optimization of Genetic Algorithms -- Tackling Epistatic Problems Using Dynastically Optimal Recombination -- Tackling Epistatic Problems Using Dynastically Optimal Recombination -- Extended Methods for Classification of Remotely Sensed Images Based on ARTMAP Neural Networks -- Extended Methods for Classification of Remotely Sensed Images Based on ARTMAP Neural Networks -- Application of Artificial Neural Network in Control of Vector Pulse-Width Modulation Inverter -- Application of Artificial Neural Network in Control of Vector Pulse-Width Modulation Inverter -- Modeling Multiple Microstructure Transformations in Steels with a Boltzmann Neural Net -- Modeling Multiple Microstructure Transformations in Steels with a Boltzmann Neural Net -- Evolutionary Computation: Where we are and where we're headed -- Evolutionary Computation: Where we are and where we're headed -- Fuzzy Controllers by Unconventional Technologies for Tentacle Arms -- Fuzzy Controllers by Unconventional Technologies for Tentacle Arms -- Control of Robot Arm Approach by Fuzzy Pattern Comparison Technique -- Control of Robot Arm Approach by Fuzzy Pattern Comparison Technique -- A Fuzzy Shapes Characterization for Robotics -- A Fuzzy Shapes Characterization for Robotics -- ART-based Automatic Generation of Membership Functions for Fuzzy Controllers in Robotics -- ART-based Automatic Generation of Membership Functions for Fuzzy Controllers in Robotics -- On Two Types of L M Fuzzy Lattices -- On Two Types of L M Fuzzy Lattices -- Generated Connectives in Many Valued Logic -- Generated Connectives in Many Valued Logic -- Conjugacy Classes of Fuzzy Implications -- Conjugacy Classes of Fuzzy Implications -- Characterization of Dienes Implication -- Characterization of Dienes Implication -- Neural Networks Based on Multi-valued and Universal Binary Neurons: Theory,

Application to Image Processing and Recognition -- Neural Networks Based on Multi-valued and Universal Binary Neurons: Theory, Application to Image Processing and Recognition -- Modeling of Thermal Two Dimensional Free Turbulent Jet by a Three Layer Two Time Scale Cellular Neural Network -- Modeling of Thermal Two Dimensional Free Turbulent Jet by a Three Layer Two Time Scale Cellular Neural Network -- A Neural Approach for Detection of Road Direction in Autonomous Navigation -- A Neural Approach for Detection of Road Direction in Autonomous Navigation -- A Neural Segmentation of Multispectral Satellite Images -- A Neural Segmentation of Multispectral Satellite Images -- Design of a Traffic Junction Controller Using Classifier System and Fuzzy Logic -- Design of a Traffic Junction Controller Using Classifier System and Fuzzy Logic -- Using Fuzzy Logic to Control Traffic Signals at Multi-phase Intersections -- Using Fuzzy Logic to Control Traffic Signals at Multi-phase Intersections -- Fuzzy Control to Non-minimal Phase Processes -- Fuzzy Control to Non-minimal Phase Processes -- Robust Un-coupled Fuzzy Controller for Longitudinal and Lateral Control of an AGV -- Robust Un-coupled Fuzzy Controller for Longitudinal and Lateral Control of an AGV -- Center Manifold Theory Approach to the Stability Analysis of Fuzzy Control Systems -- Center Manifold Theory Approach to the Stability Analysis of Fuzzy Control Systems -- Stability Analysis of Fuzzy and Other Nonlinear Systems Based on the Method of Convex Decomposition -- Stability Analysis of Fuzzy and Other Nonlinear Systems Based on the Method of Convex Decomposition -- Fuzzy Utilities Comparison in Multicriteria Analysis -- Fuzzy Utilities Comparison in Multicriteria Analysis -- A Possibilistic Formalization of Case-Based Reasoning and Decision Making -- A Possibilistic Formalization of Case-Based Reasoning and Decision Making -- Parameter Determination for Nano-Scale Modeling -- Parameter Determination for Nano-Scale Modeling -- Optimizing Routing Algorithms in Telecommunication Networks with Neural Networks and Fuzzy Logic -- Optimizing Routing Algorithms in Telecommunication Networks with Neural Networks and Fuzzy Logic -- Optimum Work Roll Profile Selection in the Hot Rolling of Wide Steel Strip Using Computational Intelligence -- Optimum Work Roll Profile Selection in the Hot Rolling of Wide Steel Strip Using Computational Intelligence -- Analysing Epileptic Events On-Line by Soft-Computing-Systems -- Analysing Epileptic Events On-Line by Soft-Computing-Systems -- On Interactive Linguistic Summarization of Databases via a Fuzzy-Logic-Based Querying Add-On to Microsoft Access® -- On Interactive Linguistic Summarization of Databases via a Fuzzy-Logic-Based Querying Add-On to Microsoft Access® -- A General-Purpose Fuzzy Engine for Crop Control -- A General-Purpose Fuzzy Engine for Crop Control -- Fuzzy Control of a Physical Double Inverted Pendulum Model -- Fuzzy Control of a Physical Double Inverted Pendulum Model -- Synthesis of Stable Fuzzy PD/PID Control Laws for Robotic Manipulators from a Variable Structure Systems Standpoint -- Synthesis of Stable Fuzzy PD/PID Control Laws for Robotic Manipulators from a Variable Structure Systems Standpoint -- On Data Summaries Based on Gradual Rules -- On Data Summaries Based on Gradual Rules -- Working Towards Connectionist Modeling of Term Formation -- Working Towards Connectionist Modeling of Term Formation -- A Quantization-Model of the Neural Nets -- A Quantization-Model of the Neural Nets -- Risk Analysis Using Perceptrons and Quadratic Programming -- Risk Analysis Using Perceptrons and Quadratic Programming -- Finding Relevant Process Characteristics with a Method for Data-Based Complexity Reduction -- Finding Relevant Process Characteristics with

a Method for Data-Based Complexity Reduction -- Traffic Control in an ATM Network Using Rough Set Theory -- Traffic Control in an ATM Network Using Rough Set Theory -- Evaluation of Characteristic Temperatures of Materials Using an Approximate Reasoning Method -- Evaluation of Characteristic Temperatures of Materials Using an Approximate Reasoning Method -- A Human Centered Architecture for Distributed Retrieval of Medical Images -- A Human Centered Architecture for Distributed Retrieval of Medical Images -- Representing the Real-Time-Behaviour of Technical Processes in Neural Nets by Using the Phase-Space-Flow of the Degrees of Freedom of the Nets -- Representing the Real-Time-Behaviour of Technical Processes in Neural Nets by Using the Phase-Space-Flow of the Degrees of Freedom of the Nets -- Spatial Neural Networks Based on Fractal Algorithms Biomorph Nets of Nets of... -- Spatial Neural Networks Based on Fractal Algorithms Biomorph Nets of Nets of... -- Adaptive Control Systems Based on Neural Networks -- Adaptive Control Systems Based on Neural Networks -- Function Approximation Using Tensor Product Bernstein Polynomials- Neuro & Evolutionary Approaches -- Function.

Sommario/riassunto

Fuzzy Days in Dortmund were held for the first time in 1991. Initially, the conference was intended for scientists and practitioners as a platform for discussions on theory and application of fuzzy logic. Early on, synergetic links with neural networks were included and the conference evolved gradually to embrace the full spectrum of what is now called Computational Intelligence (CI). Therefore, it seemed logical to launch the 4th Fuzzy Days in 1994 as a conference for CI—one of the world's first conferences featuring fuzzy logic, neural networks and evolutionary algorithms together in one event. Following this successful tradition, the 6th Fuzzy Days' aim is to provide an international forum for reporting significant results on the theory and application of CI-methods. Once again, we have received a remarkable number of papers. I would like to express my gratitude to all who have been interested in presenting their work within the framework of this conference and to the members of the programme committee for their valuable work (in this edition each paper was reviewed by five referees). In particular, I wish to thank all keynote and tutorial speakers for their commitment. Last but not least, I am obliged to the Deutsche Forschungsgemeinschaft and Kommunalverband Ruhrgebiet for their financial support.
