

Table of Contents

An Approach to Interval-Valued R-Implications and Automorphisms.....	1
<i>Benjamin Bedregal, Graçaliz Dimuro and Renata Reiser</i>	
Recognition and Teaching of Robot Skills by Fuzzy Time-Modeling.....	7
<i>Rainer Palm, Bourhane Kadmiry, Boyko Iliev and Dimiter Driankov</i>	
A Consensus Model for Group Decision Making with Incomplete Unbalanced Fuzzy Linguistic Preference Relations	13
<i>Francisco Javier Cabrerizo, Juan Manuel Moreno and Enrique Herrera-Viedma</i>	
Real-Time Segmentation of Moving Objects in H.264 Compressed Domain with Dynamic Design of Fuzzy Sets.....	19
<i>Cayetano Solana-Cipres, Luis Rodriguez-Benitez, Juan Moreno-Garcia, Luis Jimenez and Gerardo Fernandez-Escribano</i>	
On the Benefits of Representing Music Objects as Fuzzy Sets.....	25
<i>Klaas Bosteels, Elias Pampalk and Etienne Kerre</i>	
Type-II Fuzzy Possibilistic C-Mean Clustering.....	30
<i>M. H. Fazel Zarandi, Marzie Zarinbal and I. B. Turksen</i>	
Opposite Fuzzy Sets with Applications in Image Processing	36
<i>Hamid R. Tizhoosh</i>	
Genetic Cooperative-Competitive Fuzzy Rule Based Learning Method using Genetic Programming for Highly Imbalanced Data-Sets	42
<i>Alberto Fernández, Francisco José Berlanga, Maria Jose Del Jesus and Francisco Herrera</i>	
New Fuzzy Color Clustering Algorithm Based on hsl Similarity	48
<i>Vasile Patrascu</i>	
Multi-Dimensional Fuzzy Transforms for Attribute Dependencies.....	53
<i>Ferdinando di Martino, Vincenzo Loia and Salvatore Sessa</i>	
Interval-Valued Fuzzy Propositions. An Application to the L-Fuzzy Contexts with Absent Values	58
<i>Cristina Alcalde, Ana Burusco and Ramon Fuentes-González</i>	
On the Structure of the k-Additive Fuzzy Measures	64
<i>Elias F. Combarro and Pedro Miranda</i>	
Type-2 Fuzzy Trust Aggregation.....	70
<i>John T. Rickard, Sam Hamilton and Wendy Hamilton</i>	
On Vertices of the k-Additive Monotone Core	76
<i>Pedro Miranda and Michel Grabisch</i>	
Resolution of Fuzzy Relation Equations with Sup-Inf Composition over Complete Brouwerian Lattices — a review	82
<i>Xue-ping Wang and Feng Sun</i>	
Aggregation Operators for Conditional Crispness	88
<i>Doretta Vivona and Maria Divari</i>	
A New Conditioning Rule, Its Generalization and Evidential Reasoning.....	92
<i>Koichi Yamada, Vilany Kimala and Muneyuki Unehara</i>	
Consistency of Pair-wise Comparison Matrix with Fuzzy Elements	98
<i>Jaroslav Ramík</i>	
Fuzzy Continuous Evaluation in Training Systems Based on Virtual Reality	102
<i>Ronei Moraes and Liliane Machado</i>	

IFSA – EUSFLAT 2009

A Comparative Analysis of Symbolic Linguistic Computational Models	108
<i>Rosa M. Rodriguez, Luis Martinez and Macarena Espinilla</i>	
Universal Integrals Based on Level Dependent Capacities.....	114
<i>Erich Peter Klement, Anna Kolesárová, Radko Mesiar and Andrea Stupňanová</i>	
A Conceptual Framework for Understanding a Fuzzy System	119
<i>José M. Alonso and Luis Magdalena</i>	
An Experimental Study on the Interpretability of Fuzzy Systems	125
<i>José M. Alonso and Luis Magdalena</i>	
Games and Capacities on Partitions	131
<i>Michel Grabisch</i>	
The Minimization of the Risk of Falling in Portfolios under Uncertainty	137
<i>Yuji Yoshida</i>	
Approximations by Interval, Triangular and Trapezoidal Fuzzy Numbers.....	143
<i>Chi-Tsuen Yeh</i>	
Fuzzy c-Means Herding	149
<i>Thomas A. Runkler</i>	
Interval AHP for Group of Decision Makers	155
<i>Tomoe Entani</i>	
A Monge Algorithm for Computing the Choquet Integral on Set Systems	161
<i>Ulrich Faigle and Michel Grabisch</i>	
Decomposition of Interval-Valued Fuzzy Morphological Operations by Weak $[\alpha_1, \alpha_2]$ -cuts	167
<i>Tom Mélange, Mike Nachtgael, Etienne Kerre and Peter Sussner</i>	
An Alternative Operationalization of Fuzzy Consideration Set. Application to Tourism.....	173
<i>Luisa Lucila Lazzari, Patricia Inés Mouliá and Mariano Eriz</i>	
Ant Colony Optimization for Distributed Routing Path Optimization in Optical Burst-Switched Networks.....	178
<i>Joao Pedro, Joao Pires and João Paulo Carvalho</i>	
Non-Conjunctive and Non-Disjunctive Uninorms in Atanassov's Intuitionistic Fuzzy Set Theory.....	184
<i>Glad Deschrijver</i>	
Fuzzy Descriptions Logics with Fuzzy Truth Values	189
<i>Fernando Bobillo and Umberto Straccia</i>	
A New Approach to Fuzzy Location of Cephalometric Landmarks in Craniofacial Superimposition	195
<i>Oscar Ibáñez, Oscar Cerdón, Sergio Damas, Sergio Guadarrama and José Santamaría</i>	
Incorporating Fuzziness in Spatial Susceptible-Infected Epidemic Models	201
<i>Jan Baetens and Bernard De Baets</i>	
Recurrent Neural Kalman Filter Identification and Indirect Adaptive Control of a Continuous Stirred Tank Bioprocess...207	
<i>Ieroham Baruch and Carlos Román Mariaca Gaspar</i>	
A Multi-granular Linguistic Promethee Model.....	213
<i>Nesrin Halouani, Luis Martínez, Habib Chabchoub, Jean-Marc Martel and Jun Liu</i>	
Generating Minimum Dispersion Densities from an Interval-Valued Fuzzy Set.....	219
<i>Carol Walker, Elbert Walker and Ronald Yager</i>	
Approximate Reasoning in Surgical Decisions.....	225
<i>Elisabeth Rakus-Andersson</i>	

Chaos Induced by Turbulent and Erratic Functions.....	231
<i>Heriberto Román-Flores, Yurilev Chalco-Cano and Geraldo Nunes-Silva</i>	
Verbalizing Time-series Data: With an Example of Stock Price Trends.....	234
<i>Ichiro Kobayashi and Naoko Okumura</i>	
Differential Equations based on Fuzzy Rules.....	240
<i>Marina R. B. Dias and Laécio C. Barros</i>	
Sparsely Connected Autoassociative Fuzzy Implicative Memories for the Reconstruction of Large Gray-Scale Images ...	247
<i>Marcos Eduardo Valle</i>	
A Restriction Level Approach for the Representation and Evaluation of Fuzzy Association Rules.....	253
<i>Miguel Delgado, M. Dolores Ruiz and Daniel Sanchez</i>	
Semantic Proximity Between Queries and the Empty Answer Problem.....	259
<i>Patrick Bosc, Carmen Brando, Allel Hadjali, Hélène Jaudoin and Olivier Pivert</i>	
A Fuzzy Delay Differential Equation Model for HIV Dynamics	265
<i>Rosana M. Jafelice, Laécio C. Barros and Rodney C. Bassanezi</i>	
Dispersal of Leaf-Cutting Ants: fuzzy mathematical modeling, numerical approximation and simulations.....	271
<i>Rosana Motta Jafelice, Cesar Guilherme Almeida, João Frederico C. A. Meyer and Heraldo L. Vasconcelos</i>	
Continuous R-Implications	277
<i>Balasubramaniam Jayaram and Michal Baczynski</i>	
Fuzzy Voxel Object	282
<i>Derek Anderson, Robert Luke, Erik Stone and James Keller</i>	
Fuzzy Logic-Based Image Processing Using Graphics Processor Units.....	288
<i>Robert Luke, Derek Anderson, James Keller and Simon Coupland</i>	
Dominance-based Rough Set Analysis for Uncertain Data Tables.....	294
<i>Tuan-Fang Fan, Churn-Jung Liau and Duen-Ren Liu</i>	
Overlap Index, Overlap Functions and Migrativity	300
<i>Humberto Bustince, Javier Fernandez, Radko Mesiar, Javier Montero and Raul Orduna</i>	
On 'Family Resemblances' with Fuzzy Sets.....	306
<i>Enric Trillas, Claudio Moraga and Alejandro Sobrino</i>	
Convergence Theorems for Generalized Random Variables and Martingales.....	312
<i>Andrew Pinchuck</i>	
Production and Transportation Planning — A fuzzy Approach for Minimizing the Total Cost.....	317
<i>Heinrich Rommelfanger</i>	
The Use of Interval-Valued Probability Measures in Fuzzy Linear Programming: a constraint set approach.....	321
<i>Phantipa Thipwivatpotjana and Weldon Lodwick</i>	
Human Perceptions versus Computational Perceptions in Computational Theory of Perceptions	327
<i>Gracian Trivino and Alejandro Sobrino</i>	
A Characterization of Residual Implications Derived from Uninorms	333
<i>Isabel Aguiló, Jaume Suñer and Joan Torrens</i>	
A Logic-Based Approach for Evaluating Interpretability of Fuzzy Rule-Based Classifiers.....	339
<i>Corrado Mencar, Ciro Castiello and Anna M. Fanelli</i>	
Cloud Based Design Optimization.....	345
<i>Martin Fuchs</i>	

Local Models for the Analysis of Spatially Varying Relationships in a Lignite Deposit.....	351
<i>Bulent Tutmez, A. Erhan Tercan, Uzay Kaymak and Christopher D. Lloyd</i>	
Fuzzy Integrals over Complete Residuated Lattices	357
<i>Antonin Dvorak and Michal Holcapek</i>	
A Link Between the 2-additive Choquet Integral and Belief Functions	363
<i>Brice Mayag, Michel Grabisch and Christophe Labreuche</i>	
Agent-based Fuzzy Constraint-directed Negotiation Mechanism for Planning and Scheduling in Supply Chain.....	369
<i>Bo-Ruei Kao, K. Robert Lai and Menq-Wen Lin</i>	
Learning and Classification of Events in Monitored Environments	375
<i>Javier Albusac, Jose Jesús Castro, Lorenzo Manuel López López, David Vallejo and Luis Jiménez</i>	
A Hybrid Method for Soccer Video Events Retrieval Using Fuzzy Systems	381
<i>Ehsan Lotfi, M. Akbarzadeh-T., Hamid Reza Pourreza, Mona Yaghoubi and F. Dehghan</i>	
Pointwise Defined CRI-Based Aggregation Distributive Operators Are Trivial	386
<i>Siegfried Gottwald and Philipp Hüsam</i>	
A Possibilistic Approach to Bottleneck Combinatorial Optimization Problems with Ill-Known Weights.....	390
<i>Adam Kasperski and Pawel Zielinski</i>	
Web Usage Mining: users' navigational patterns extraction from web logs using ant-based clustering method	396
<i>Kobra Etmnani, Mohammad Reza Akbarzadeh Tootoonchi and Noorali Raeaji Yanehsari</i>	
Multiplicative and Implicative Importance Weighted Averaging Aggregation Operators with Accurate Andness Direction	402
<i>Henrik Legind Larsen</i>	
Training a Personal Alert System for Research Information Recommendation	408
<i>German Hurtado Martin, Chris Cornelis and Helga Naessens</i>	
On Reduced Semantics for Fuzzy Predicate Logics.....	414
<i>Pilar Dellunde</i>	
Fuzzy Clustering for Finding Fuzzy Partitions of Many-Valued Attribute Domains in a Concept Analysis Perspective	420
<i>Yassine Djouadi, Basma Alouane and Henri Prade</i>	
On Possibilistic Sequencing Problems with Fuzzy Parameters.....	426
<i>Adam Kasperski and Pawel Zielinski</i>	
The Bandler-Kohout Subproduct as a Suitable Inference	432
<i>Martin Stepnicka and Balasubramaniam Jayaram</i>	
Early Start Can Inhibit Learning: Towards A New Explanation.....	438
<i>Olga Kosheleva</i>	
Intensity Assessment of Pedestrian Collisions in City of Mashhad based on Fuzzy Probabilities	443
<i>Farzaneh Tatari and Mohammad-R. Akbarzadeh-T</i>	
Number-free Mathematics Based on T-norm Fuzzy Logic.....	449
<i>Libor Behounek</i>	
Uncertainty Can Decrease Privacy: an observation	455
<i>Karen Villaverde and Olga Kosheleva</i>	
Decentralized Adaptive Fuzzy-Neural Control of an Anaerobic Digestion Bioprocess Plant	460
<i>Ieroham Baruch and Rosalba Galvan-Guerra</i>	

Enforcing Local Properties in Online Learning First Order TS-fuzzy Systems by Incremental Regularization.....	466
<i>Nils Rosemann, Werner Brockmann and Bastian Neumann</i>	
Dynamic vs. Static Decision Strategies in Adversarial Reasoning	472
<i>David Pelta and Ronald R. Yager</i>	
Generalized Atanassov's Intuitionistic Fuzzy Index. Construction Method.....	478
<i>Edurne Barrenechea, Humberto Bustince, Miguel Pagola, Javier Fernandez and Josean Sanz</i>	
Time Series Analysis and Prediction Based on Fuzzy Rules and the Fuzzy Transform	483
<i>Martin Stepnicka, Viktor Pavliska, Vilem Novak, Irina Perfilieva, Lenka Vavrickova and Iva Tomanova</i>	
On the Use of Aggregation Operators for Location Privacy	489
<i>Aida Valls, Jordi Nin and Vicenç Torra</i>	
Application of Fuzzy Vectors of Normalized Weights in Decision Making Models.....	495
<i>Ondrej Pavlascka and Jana Talasova</i>	
Integrating Complex User Preferences into a Route Planner: A Fuzzy-Set-Based Approach	501
<i>Amine Mokhtari, Olivier Pivert and Allel Hadjali</i>	
Basic Properties of L-fuzzy Quantifiers of the Type $\langle 1 \rangle$ Determined by Fuzzy Measures.....	507
<i>Antonin Dvorak and Michal Holcapek</i>	
On the Definition of Extended Norms and Co-norms to Aggregate Fuzzy Bipolar Conditions	513
<i>Ludovic Liétard and Daniel Rocacher</i>	
An Abstract Approach to Fuzzy Logics: implicational semilinear logics	519
<i>Petr Cintula and Carles Noguera</i>	
Polynomial Functions on Bounded Chains	525
<i>Miguel Couceiro and Jean-Luc Marichal</i>	
Quasi-Polynomial Functions on Bounded Chains.....	531
<i>Miguel Couceiro and Jean-Luc Marichal</i>	
Novel Methods for the Design of General Type-2 Fuzzy Sets based on Device Characteristics and Linguistic Labels Surveys.....	537
<i>Christian Wagner and Hani Hagrass</i>	
Flow Line Systems with Possibilistic Data: a System with Waiting Time in Line Uncertain	544
<i>David de la Fuente and María José Pardo</i>	
Valuations on the Algebra of Intervals	550
<i>Mirko Navara</i>	
Impute Missing Assessments by Opinion Clustering in Multi-Criteria Group Decision Making Problems.....	555
<i>Jun Ma, Guangquan Zhang, Jie Lu and Da Ruan</i>	
Application of Zadeh's Impossibility Principle to Approximate Explanation.....	561
<i>Vesa Niskanen</i>	
On the Completion Mechanism Produced by the Choquet Integral on Some Decision Strategies	567
<i>Christophe Labreuche</i>	
Fuzzy Implications and the Weak Law of Importation	573
<i>Sebastià Massanet and Joan Torrens</i>	
Fuzzy Transform and Smooth Functions	579
<i>Luciano Stefanini</i>	

Towards F-transform of a Higher Degree	585
<i>Irina Perfilieva and Martina Daňková</i>	
Some Chaotic and Mixing Properties of Zadeh's Extension	589
<i>Jiri Kupka</i>	
Associativity of Triangular Norms in Light of Web Geometry	595
<i>Milan Petrik and Peter Sarkoci</i>	
Fuzzy Arithmetic with Parametric LR Fuzzy Numbers	600
<i>Luciano Stefanini and Laerte Sorini</i>	
Type-2 Fuzzy Arithmetic using Alpha-planes	606
<i>Hussam Hamrawi and Simon Coupland</i>	
Operations for Real-Valued Bags and Bag Relations	612
<i>Sadaaki Miyamoto</i>	
An Explicit Mapping for Kernel Data Analysis and Application to Text Analysis	618
<i>Sadaaki Miyamoto, Yuichi Kawasaki and Keisuke Sawazaki</i>	
Distorted Probabilities and m-Separable Fuzzy Measures	624
<i>Yasuo Narukawa and Vicenc Torra</i>	
Image Analysis Applications of Morphological Operators based on Uninorms	630
<i>Manuel González Hidalgo, Arnau Mir Torres, Daniel Ruiz Aguilera and Joan Torrens-Sastre</i>	
A Value via Posets Induced by Graph-Restricted Communication Situations.....	636
<i>Katsushige Fujimoto and Aoi Honda</i>	
Ranking of Fuzzy Numbers, Some Recent and New Formulas	642
<i>Saeid Abbasbandy</i>	
Lattice Properties of Discrete Fuzzy Numbers under Extended Min and Max	647
<i>Jaume Casasnovas and J. Vicente Riera</i>	
On Some Classes of Aggregation Functions that are Migrative	653
<i>Janos Fodor and Imre J. Rudas</i>	
Intelligent Operation Support Method based on Time Change Fuzzy Sets.....	657
<i>Seiji Yasunobu and Mitsuru Kokuhuda</i>	
Semantical Evaluators.....	663
<i>Antoon Bronselaer and Guy De Tre</i>	
A Hybrid Meta-Heuristic to Solve the Portfolio Selection Problem.....	669
<i>Jose M. Cadenas, Juan V. Carrillo, M. Carmen Garrido, Carlos Ivorra, Teresa Lamata and Vicente Liern</i>	
Information System for the valuation of Universities in Spain	675
<i>M. Socorro Garcia-Cascales and M. Teresa Lamata</i>	
Multiple-Criteria Fuzzy Evaluation: The FuzzME Software Package	681
<i>Jana Talasova and Pavel Holecek</i>	
A Computing with Words Path from Fuzzy Logic to Natural Language.....	687
<i>Claudio Moraga and Enric Trillas</i>	
Approximation Properties of Inverse Fuzzy Transforms over the Residuated Lattice.....	693
<i>Martina Dankova and Martin Stepnicka</i>	
An Interval Type-2 Fuzzy Distribution Network	697
<i>Simon Miller, Viara Popova, Robert John and Mario Gongora</i>	

Fuzzy Differential Equation with π -Derivative.....	703
<i>Yurilev Chalco-Cano, Heriberto Román-Flores and María Dolores Jiménez-Gamero</i>	
Fuzzy Logic Approach to Represent and Propagate Imprecision in Agri-Environmental Indicator Assessment.....	707
<i>Zainab Assaghir, Philippe Girardin and Amedeo Napoli</i>	
Representation of States on MV-algebras by Probabilities on R-generated Boolean Algebras.....	713
<i>Brunella Gerla and Tomas Kroupa</i>	
Contributions to Dynamic Multicriteria Decision Making Models.....	719
<i>Tiago Pais and Rita Ribeiro</i>	
A Fuzzy Set Approach to Ecological Knowledge Discovery.....	725
<i>Arkadiusz Salski</i>	
Numerical Solution of Interval Differential Equations with Generalized Hukuhara Differentiability.....	730
<i>Barnabas Bede and Luciano Stefanini</i>	
Phi-Calculus Fuzzy Arithmetic: application to model based control.....	736
<i>Laurent Vermeiren, Thierry M. Guerra and Hakim Lamara</i>	
Optimising the Fuzzy Granulation of Attribute Domains.....	742
<i>Marcos Cintra, Heloisa Camargo and Trevor Martin</i>	
Discriminatory Components for Pattern Classification.....	748
<i>Nick Pizzi and Witold Pedrycz</i>	
Image Reduction with Interval-Valued Fuzzy Sets and OWA Operators.....	754
<i>Daniel Paternain, Humberto Bustince, Josean Sanz, Mikel Galar and Carlos Guerra</i>	
Fuzzy Transforms, Korovkin Theorems and the Durrmeyer Operator.....	760
<i>Barnabas Bede and Imre J. Rudas</i>	
Fuzzy Logic Applications in Wireless Communications.....	763
<i>Maria Erman, Abbas Mohammed and Elisabeth Rakus-Andersson</i>	
Learning Fuzzy Rule Based Classifier in High Performance Computing Environment.....	768
<i>Vinicius da F. Vieira, Alexandre G. Evsukoff, Beatriz S. L. P. de Lima and Sylvie Galichet</i>	
The Use of Interval Type-2 Fuzzy Logic as a General Method for Edge Detection.....	774
<i>Olivia Mendoza, Patricia Melin and Juan Ramon Castro</i>	
Comparison of Two Versions of the Ferrers Property of Fuzzy Interval Orders.....	780
<i>Susana Díaz, Bernard De Baets and Susana Montes</i>	
Decomposition of the Transitivity for Additive Fuzzy Preference Structures.....	786
<i>Susana Díaz, Susana Montes and Bernard De Baets</i>	
Fuzzy Tendency based Time Series Model for Forecasting Server Traffic.....	792
<i>Nadezhda Yarushkina, Tagir Unusov and Tatyana Afanasyeva</i>	
Continuity and Additivity of the Trapezoidal Approximation Preserving the Expected Interval Operator.....	798
<i>Adrian Ban and Lucian Coroianu</i>	
A Baseline Learning Genetic Fuzzy Classifier Based on Low Quality Data.....	803
<i>Ana Palacios, Luciano Sanchez and Ines Couso</i>	
Pattern Recognition in Blur Motion Noisy Images using Fuzzy Methods for Response Integration in Ensemble Neural Networks.....	809
<i>Miguel Lopez, Patricia Melin and Oscar Castillo</i>	

Fuzzy Logic Adaptation of a Hybrid Evolutionary Method for Pattern Recognition	815
<i>Fevrier Valdez, Patricia Melin and Oscar Castillo</i>	
Fuzzy Subgroups and the Teichmüller Space	821
<i>Paavo Kukurainen</i>	
Reasoning about Actions in Fuzzy Environment	825
<i>Emad Saad, Shamiaa Elmorsy, Mahmoud Gabr and Yasser Hassan</i>	
Interval-Valued Restricted Equivalence Functions Applied on Clustering Techniques	831
<i>Aranzazu Jurio, Miguel Pagola, Daniel Paternain, Carlos Lopez-Molina and Pedro Melo-Pinto</i>	
Transitive Closure of Interval-valued Relations	837
<i>Ramón González del Campo, Luis Garmendia and Jordi Recasens</i>	
Choquet Integral Based Evaluations by Fuzzy Rules.....	843
<i>Eiichiro Takahagi</i>	
Fuzzy Modelling of Sensor Data for the Estimation of an Origin-Destination Matrix	849
<i>Krystyna Biletska, Sophie Midenet, Marie-Hélène Masson and Thierry Denoeux</i>	
Classification with Reject Options in a Logical Framework: a fuzzy residual implication approach.....	855
<i>Hoel Le Capitaine and Carl Frélicot</i>	
Fuzzy c-Lines for Data with Tolerance.....	861
<i>Yuchi Kanzawa, Yasunori Endo and Sadaaki Miyamoto</i>	
Geographic Information Retrieval based on Two Orthogonal Criteria	867
<i>Gloria Bordogna, Giorgio Ghisalberti, Marco Pagani and Giuseppe Psaila</i>	
A Semi-infinite Programming Approach to Possibilistic Optimization under Necessity Measure Constraints.....	873
<i>Masahiro Inuiguchi</i>	
On Aristotle's NC and EM Principles in Three-valued Logics	879
<i>Enric Trillas, Claudio Moraga and Eloy Renedo</i>	
Parametric Fuzzy Modelling Framework for Complex Data-Inherent Structures	885
<i>Arne-Jens Hempel and Steffen F. Bocklisch</i>	
On Triangular Norm Based Fuzzy Description Logics.....	891
<i>Ángel García-Cerdaña, Eva Armengol and Francesc Esteve</i>	
Evaluating Premises, Partial Consequences and Partial Hypotheses	897
<i>Itziar García-Honrado, Enric Trillas, Sergio Guadarrama and Eloy Renedo</i>	
Flexible Retrieval of X-Ray Images Based on Shape Descriptors Using a Fuzzy Object-Relational Database	903
<i>Juan Miguel Medina, Sergio Jaime-Castillo, Carlos D. Barranco and Jesús R. Campaña</i>	
Minimal Combination for Incremental Grammar Fragment Learning.....	909
<i>Nurfadhlina Mohd Sharef, Trevor Martin and Yun Shen</i>	
Managing Imperfect Temporal Metadata in the Catalog services of Spatial Data Infrastructures Compliant with INSPIRE	915
<i>Gloria Bordogna, Paola Carrara, Marco Pagani, Monica Pepe and Anna Rampini</i>	
On Some Fuzzy Categories of Many-Valued Topological Spaces	921
<i>Ingrida Uljane</i>	
Valued Constraint Satisfaction Problems Applied to Functional Harmony	925
<i>Nele Verbiest, Chris Cornelis and Yvan Saeys</i>	

Detecting and Reacting on Drifts and Shifts in On-Line Data Streams with Evolving Fuzzy Systems.....	931
<i>Edwin Lughofer and Plamen Angelov</i>	
How to Learn Fuzzy User Preferences with Variable Objectives	938
<i>Alan Eckhardt and Peter Vojtas</i>	
Multi-Dimensional Scaling applied to Hierarchical Rule Systems	944
<i>Thomas Gabriel, Kilian Thiel and Michael Berthold</i>	
Rule Weight Optimization and Feature Selection in Fuzzy Systems with Sparsity Constraints	950
<i>Edwin Lughofer and Stefan Kindermann</i>	
Increasing the Performance of Fuzzy Retrieval Using Impact Ordering	957
<i>Carlos Barranco and Sven Helmer</i>	
Colour Image Segmentation using A-IFSS.....	963
<i>Pedro Couto, Pedro Melo-Pinto, Humberto Bustince, Edurne Barrenechea and Miguel Pagola</i>	
SaM: A Split and Merge Algorithm for Fuzzy Frequent Item Set Mining	968
<i>Christian Borgelt and Xiaomeng Wang</i>	
Online Recognition of Fuzzy Time Series Patterns	974
<i>Gernot Herbst and Steffen F. Bocklisch</i>	
The Collapsing Method: Does the Direction of Collapse Affect Accuracy?	980
<i>Sarah Greenfield, Francisco Chiclana and Robert John</i>	
Data Integration, Approximate Categorisation and Fuzzy Associations.....	986
<i>Trevor Martin and Yun Shen</i>	
Around Fuzziness. Some Philosophical Thoughts	992
<i>Alejandro Sobrino and Martín Pereira</i>	
Fuzziness as a Model of User Preference in Semantic Web Search.....	998
<i>Veronika Vanekova and Peter Vojtas</i>	
Multi-Goal Aggregation of Reduced Preference Relations Based on Fuzzy Interactions between Decision Goals	1004
<i>Rudolf Felix</i>	
Efficient Calculation of the Value Function in Fuzzy Real Option by Differential Evolution Algorithms	1009
<i>Elettra Agliardi, Maria Letizia Guerra and Luciano Stefanini</i>	
A Dynamic Classification Method for the Discrimination of Evolving Data	1015
<i>Laurent Hartert, Moamar Sayed Mouchaweh and Patrice Billaudel</i>	
Possibility Theory and Formal Concept Analysis in Information Systems.....	1021
<i>Didier Dubois and Henri Prade</i>	
On the use of Measures of Separability of Classes to Characterise the Domains of Competence of a Fuzzy Rule Based Classification System	1027
<i>Julián Luengo and Francisco Herrera</i>	
Learning Concurrently Granularity, Membership Function Parameters and Rules of Mamdani Fuzzy Rule-based Systems	1033
<i>Michela Antonelli, Pietro Ducange, Beatrice Lazzarini and Francesco Marcelloni</i>	
Semantically-Driven Flexible Division in Fuzzy Object Oriented Models.....	1039
<i>Nicolás Marin, Carlos Molina, Olga Pons and M. Amparo Vila</i>	
Rule Base and Inference System Cooperative Learning of Mamdani Fuzzy Systems with Multiobjective Genetic Algorithms	1045
<i>Antonio Angel Márquez, Francisco Alfredo Márquez and Antonio Peregrín</i>	

IFSA – EUSFLAT 2009

On the Information Provided by Uncertainty Measures in the Classification of Remote Sensing Images	1051
<i>Luisa M. S. Gonçalves, Cidália C. Fonte, Eduardo N. B. S. Júlio and Mario Caetano</i>	
On Interval and Fuzzy Calculations of Economic Uncertainty	1057
<i>Hans Schjær-Jacobsen</i>	
A Method for Locating the Iliac Crests Based on the Fuzzy Hough Transform	1063
<i>Sergio Jaime-Castillo, Juan Miguel Medina and Antonio Garrido</i>	
Membership Dependent Stability Analysis of TS Fuzzy Controlled Systems using Coupling Attenuation	1068
<i>Jean-Yves Dieulot and Nesrine Elfelly</i>	
Characterization of L-Fuzzy Semi-Filters and Semi-Ideals	1073
<i>Jorge Jiménez, Susana Montes, Branimir Šešelja and Andreja Tepavčević</i>	
Fuzzy Intersection and Difference Model for Topological Relations	1079
<i>Ahed Alboody, Florence Sedes and Jordi Inglada</i>	
T-norm-based Fuzzy Logics and Logics for Human Reasoning	1085
<i>Thomas Vetterlein and Klaus-Peter Adlassnig</i>	
On the Representation Theorem of Multi-Adjoint Concept Lattices	1091
<i>Jesús Medina and Manuel Ojeda-Aciego</i>	
A Neuro-fuzzy System for Fraud Detection in Electricity Distribution	1096
<i>Cyro Muniz, Marley Vellasco, Ricardo Tanscheit and Karla Figueiredo</i>	
A Fuzzy System for the Assessment of Human Reliability	1102
<i>Dilza Szwarcman, Jesus Domech, Ricardo Tanscheit, Marley Vellasco, Marco Pacheco and Nicholas Ribeiro</i>	
Multivariate Segmentation of Time Series with Differential Evolution	1108
<i>Daniel Graves and Witold Pedrycz</i>	
Coevolutionary Genetic Fuzzy System to Assess Multiagent Bidding Strategies in Electricity Markets	1114
<i>Igor Walter and Fernando Gomide</i>	
A Type-2 Fuzzy Portfolio Selection Problem Considering Possibility Measure and Crisp Possibilistic Mean Value	1120
<i>Takashi Hasuike and Hiroaki Ishii</i>	
Finding the Best Flexibility Strategies by Using an Integrated Method of FAHP and QFD	1126
<i>Müjde Erol Genevois and Tuncay Gürbüz</i>	
Continuous OWA Operator and its Calculation	1132
<i>Yasuo Narukawa and Vicenc Torra</i>	
A process Algebra Approach to Fuzzy Reasoning	1136
<i>Liliana D'Errico and Michele Loreti</i>	
A Generalized Numerical Solution for Fuzzy Relation Equations	1142
<i>Iman Mohammadi Ardehali and Milad Avazbeigi</i>	
A Multiobjective Evolutionary Algorithm for Tuning Fuzzy Rule Based Systems with Measures for Preserving Interpretability	1146
<i>María José Gacto, Rafael Alcalá and Francisco Herrera</i>	
On Tolerant Fuzzy c-Means Clustering with L1-Regularization	1152
<i>Yukihiro Hamasuna, Yasunori Endo and Sadaaki Miyamoto</i>	
A Parametric Approach to Solve Quadratic Programming Problems with Fuzzy Environment in the Set of Constraints	1158
<i>Carlos Cruz, Ricardo C. Silva, José Luis Verdegay and Akebo Yamakami</i>	

IFSA – EUSFLAT 2009

Interval-Valued Fuzzy System for Segmentation of Prostate Ultrasound Images	1164
<i>Miguel Pagola, Edurne Barrenechea, Aranzazu Jurio, Mikel Galar, Pedro Couto, Farhang Sahba and Hamid Tizhoosh</i>	
A toward Framework for Generic Uncertainty Management.....	1169
<i>Ernesto Damiani, Paolo Ceravolo and Marcello Leida</i>	
Fuzzy Descriptions to Identify Temporal Substructure Changes of Cooccurrence Graphs	1177
<i>Matthias Steinbrecher and Rudolf Kruse</i>	
Online Measurement of Oily-water Using Rule-based Fuzzy Concentration Map and Halogen Fluorescence.....	1183
<i>Gyeongdong Baek, Moon-Ho Choi, Tae-Ryong Jeon, Jaewoo Cho and Sungshin Kim</i>	
Features Stereo Matching Based on Fuzzy Logic	1188
<i>Grzegorz Nieradka and Bohdan Butkiewicz</i>	
Non-additive Robust Ordinal Regression with Choquet integral, Bipolar and Level Dependent Choquet integrals	1194
<i>Silvia Angilella, Salvatore Greco and Benedetto Matarazzo</i>	
Towards a Unified Logical Framework of Fuzzy Implications to Compare Fuzzy Sets.....	1200
<i>Hoel Le Capitaine and Carl Frélicot</i>	
Preservation of Properties of Interval-Valued Fuzzy Relations	1206
<i>Barbara Pełkala</i>	
A Fuzzy Approach for the Model of Sliding Window. An Application to Behaviour Patterns Mining	1211
<i>María Ros, Miguel Delgado and Amparo Vila</i>	
Organizational Risk Assessment using Adaptive Neuro-Fuzzy Inference System	1217
<i>Javad Jassbi and Sohrab Khanmohammadi</i>	
On the Use of Min-Based Revision Under Uncertain Evidence for Possibilistic Classifiers.....	1223
<i>Salem Benferhat and Karim Tabia</i>	
Parallel Coordinates-based Fuzzy Color Distance and its Applications	1229
<i>Constantin Vertan</i>	
Definition of Fuzzy Pareto-Optimality by Using Possibility Theory.....	1234
<i>Ricardo C. Silva and Akebo Yamakami</i>	
Terrain Morphology Classification over Fuzzy Digital Elevation Models	1240
<i>Jorge Santos</i>	
Modeling of Polyester Dyeing Using an Evolutionary Fuzzy System	1246
<i>Maryam Nasiri and Stefan Berlik</i>	
Fuzzy Concept Lattice is Made by Proto-Fuzzy Concepts.....	1252
<i>Ondrej Kridlo and Stanislav Krajci</i>	
A Preliminary Analysis for Improving Model Structure of Fuzzy Habitat Preference Model for Japanese Medaka (Oryzias latipes)	1258
<i>Shinji Fukuda</i>	
Towards Intuitive Understanding of the Cauchy Deviate Method for Processing Interval and Fuzzy Uncertainty.....	1264
<i>Vladik Kreinovich and Hung Nguyen</i>	
Fuzzy and PSO Based Algorithm for Driver's Behavior Modeling	1270
<i>Sohrab Khanmohammadi, Mohammad Ali Tinati, Sehraneh Ghaemi and Mohammad Ali Badamchizadeh</i>	
Evaluating Firms' Gender Equity by Fuzzy Logic.....	1276
<i>Tindara Addabbo, Gisella Facchinetti, Giovanni Mastroleo and Tiziana Lang</i>	

Morphisms in Categories of Sets with Similarity Relations	1282
<i>Jiri Mockor</i>	
Bipolar Queries: An Approach and its Various Interpretations	1288
<i>Slawomir Zadrozny and Janusz Kacprzyk</i>	
A Fuzzy Variant of the Rand Index for Comparing Clustering Structures	1294
<i>Eyke Huellermeier and Maria Rifqi</i>	
Fuzzy Modeling of Labeled Point Cloud Superposition for the Comparison of Protein Binding Sites	1299
<i>Thomas Foer and Eyke Huellermeier</i>	
An Interval Approach for Fuzzy Linear Regression with Imprecise Data	1305
<i>Amory Bisserier, Reda Boukezzoula and Sylvie Galichet</i>	
A Predator-Prey Model with Fuzzy Initial Populations	1311
<i>Muhammad Zaini Ahmad and Bernard De Baets</i>	
Local Semantic Context Analysis for Automatic Ontology Matching	1315
<i>Giuseppe Fenza, Vincenzo Loia and Sabrina Senatore</i>	
Using Fuzzy Linguistic Summaries for the Comparison of Time Series: an application to the analysis of investment fund quotations	1321
<i>Janusz Kacprzyk and Anna Wilbik</i>	
Exchanging Iterated Expectations of Random Upper Semicontinuous Functions: an application to decision theory	1327
<i>Miguel López-Díaz and Luis J. Rodríguez-Muñiz</i>	
60 years "A Mathematical Theory of Communication" — Towards a "Fuzzy Information Theory"	1332
<i>Rudolf Seising</i>	
On Classical, Fuzzy Classical, Quantum and Fuzzy Quantum Systems	1338
<i>Rudolf Seising</i>	
Possibility and Necessity Evaluations based on Ordinal Comparability	1343
<i>Masaaki Ida</i>	
Fuzzy Answer Set Programming with Literal Preferences	1347
<i>Jeroen Janssen, Steven Schockaert, Dirk Vermeir and Martine De Cock</i>	
Two Results About Optimization of Fuzzy Variable Functions	1353
<i>A. David Baez-Sanchez</i>	
Industrial Monitoring by Evolving Fuzzy Systems	1358
<i>Lara Aires, Joao Araujo and Antonio Dourado</i>	
Probabilistic Decision Making with the OWA Operator and its Application in Investment Management	1364
<i>José M. Merigó</i>	
Some Results on Lipschitz Quasi-Arithmetic Means	1370
<i>Gleb Beliakov, Tomasa Calvo and Simon James</i>	
Modeling Position Specificity in Sequence Kernels by Fuzzy Equivalence Relations	1376
<i>Ulrich Bodenhofer, Karin Schwarzbauer, Mihaela Ionescu and Sepp Hochreiter</i>	
Universal Approximation of a Class of Interval Type-2 Fuzzy Neural Networks Illustrated with the Case of Non-linear Identification	1382
<i>Juan R. Castro, Oscar Castillo, Patricia Melin, Antonio Rodriguez-Diaz and Olivia Mendoza</i>	
Spectral Learning with Type-2 Fuzzy Numbers for Question/Answering System	1388
<i>Asli Celikyilmaz and I. Burhan Turksen</i>	

Can We Learn Algorithms from People Who Compute Fast: an indirect analysis in the presence of fuzzy descriptions ..1394 <i>Olga Kosheleva</i>	1394
A Parametric Method to Solve Quadratic Programming Problems with Fuzzy Costs.....1398 <i>Ricardo C. Silva, Carlos Cruz and Akebo Yamakami</i>	1398
Comparison of Multicriteria Methods for Land-use Suitability Assessment.....1404 <i>Jozo Dujmovic, Guy De Tre and Suzana Dragicevic</i>	1404
Computing with Actions: the case of driving a car in a simulated car race1410 <i>Sergio Guadarrama</i>	1410
Analysis of Similarity Measures for Atanassov's Intuitionistic Fuzzy Sets1416 <i>Eulalia Szmidt and Janusz Kacprzyk</i>	1416
Non-Commutative EQ-Logics and Their Extensions.....1422 <i>Vilem Novak and Martin Dyba</i>	1422
Discriminant Analysis for Fuzzy Random Variables Based on Nonparametric Regression.....1428 <i>Ana Colubi, M. Ángeles Gil, Gil González-Rodríguez and Wolfgang Trutschnig</i>	1428
Confidence Regions for the Mean of a Fuzzy Random Variable.....1433 <i>Gil González-Rodríguez, Wolfgang Trutschnig and Ana Colubi</i>	1433
A Fuzzy Multi-Criteria Approach to WEEE Treatment Strategy Selection.....1439 <i>İlke Bereketli, Tuncay Gürbüz and Mijde Erol Genevois</i>	1439
Hierarchic Approach in the Analysis of Tomographic Eye Image1444 <i>Robert Koprowski and Zygmunt Wrobel</i>	1444
A Two Step Solution Procedure to a Fuzzy Medical Waste Disposal Facility Location Problem.....1450 <i>H. Ziya Ulukan and Yeşim Kop</i>	1450
Online Classification of Machine Operation Modes Based on Information Compression and Fuzzy Similarity Analysis.....1456 <i>Gancho Vachkov</i>	1456
Introducing Relation Compactness for Generating a Flexible Size of Search Results in Fuzzy Queries.....1462 <i>Xiaohui Tang, Guoqing Chen and Qiang Wei</i>	1462
Robot Cooperation without Explicit Communication by Fuzzy Signatures and Decision Trees.....1468 <i>Aron Ballagi, Laszlo T. Koczy and Tom Gedeon</i>	1468
A Fuzzy Filter for the Removal of Gaussian Noise in Colour Image Sequences.....1474 <i>Tom Mélange, Mike Nachtgeael and Etienne Kerre</i>	1474
Visualising Rough Time Intervals in a Two-Dimensional Space1480 <i>Yi Qiang, Katrin Asmussen, Matthias Delafontaine, Birger Stichelbaut, Guy De Tre, Philippe De Maeyer and Nico Van de Weghe</i>	1480
Repairing Infeasibility in Fuzzy Goal Programming1486 <i>Mariano Jiménez, Amelia Bilbao, Mar Arenas and Maria Victoria Rodriguez-Uria</i>	1486
Sorted Kernel Matrices as Cluster Validity Indexes1490 <i>Francisco Queiroz, Antonio Braga and Witold Pedrycz</i>	1490
Complementary Source Information Cooperation Within a Decision System for Crop Monitoring1496 <i>Mahmoud El Hajj, Serge Guillaume and Agnes Begue</i>	1496
Soft Computing Confronting Philosophical and Sociological Critiques to Classical AI1502 <i>Veronica Sanz</i>	1502

Optimizing Fuzzy Flip-Flop Based Neural Networks by Bacterial Memetic Algorithm.....	1508
<i>Rita Lovassy, Laszlo T. Koczy and Laszlo Gal</i>	
Bi-criteria Genetic Selection of Bagging Fuzzy Rule-based Multiclassification Systems.....	1514
<i>Krzysztof Trawinski, Arnaud Quirin and Oscar Cordon</i>	
A New Fuzzy Noise-Rejection Data Partitioning Algorithm with Revised Mahalanobis Distance.....	1520
<i>Mohammad Hossein Fazel Zarandi, Milad Avazbeigi and I. Burhan Turksen</i>	
Determining OWA Weights by Maximizing Consensus	1527
<i>José Luis García-Lapresta, Bonifacio Llamazares and Teresa Peña</i>	
Weighted Trapezoidal Approximations of Fuzzy Numbers.....	1531
<i>Przemyslaw Grzegorzewski and Karolina Pasternak-Winiarska</i>	
Nonlinear-shaped Approximation of Fuzzy Numbers	1535
<i>Przemyslaw Grzegorzewski and Luciano Stefanini</i>	
Characterizing Fuzzy Modal Semantics by Fuzzy Multimodal Systems with Crisp Accessibility Relations.....	1541
<i>Félix Bou, Francesc Esteva, Lluís Godo and Ricardo Oscar Rodríguez</i>	
Fuzzy Optimization in Vehicle Routing Problems.....	1547
<i>Julio Brito, José Andrés Moreno and José Luis Verdegay</i>	
Weighted Decisions in a Fuzzy Random Forest	1553
<i>Piero Bonissone, José M. Cadenas, Carmen Garrido, Ramón Andrés Díaz and Raquel Martínez</i>	
Evolutionary Learning of Quantified Fuzzy Rules for Hierarchical Grouping of Laser Sensor Data in Intelligent Control	1559
<i>Manuel Mucientes, Ismael Rodríguez-Fdez and Alberto Bugarín</i>	
Graded Equipollence of Fuzzy Sets	1565
<i>Michal Holcapek and Matej Turcan</i>	
Managing the Absence of Items in Fuzzy Association Mining.....	1571
<i>Carlos Molina, Daniel Sanchez, Jose-Maria Serrano and M. Amparo Vila</i>	
Towards an Interpretation of the Connectivity Analysis in the Frame of Fuzzy Equivalence Relations for Medical Diagnoses.....	1577
<i>Tatiana Kiseliova</i>	
Identification of Web Information using Concept Hierarchies and On-line Updates of Concept Importance.....	1583
<i>Zhan Li, Ronald R. Yager and Marek Reformat</i>	
Possibility Distribution: a unified representation for parameter estimation.....	1589
<i>Gilles Mauris</i>	
Cooperative Partner Agent of Seven-Card-Stud Poker	1595
<i>Keisuke Osone and Takehisa Onisawa</i>	
Systems of Fuzzy Relation Equations in a Space with Fuzzy Preorder	1601
<i>Irina Perfilieva</i>	
On M-Approximative Operators and M-Approximative Systems	1606
<i>Alexander Sostak</i>	
A Fuzzy Weight Representation for Inner Dependence Method AHP.....	1612
<i>Shin-ichi Ohnishi, Takahiro Yamanoi and Hideyuki Imai</i>	
On Conceptual Indexing for Data Summarization.....	1618
<i>Henrik Bulskov and Troels Andreasen</i>	

Fuzzy Analogical Model of Adaptation for Case-Based Reasoning	1625
<i>Bernadette Bouchon-Meunier, Christophe Marsala and Maria Rifqi</i>	
Embedded Genetic Learning of Highly Interpretable Fuzzy Partitions	1631
<i>Jorge Casillas</i>	
Non Additive Measures for Group Multi Attribute Decision Models.....	1637
<i>Marta Cardin and Silvio Giove</i>	
A Desktop Calculator for Parametric Fuzzy Arithmetic	1643
<i>Laerte Sorini</i>	
Discussions on Interpretability of Fuzzy Systems using Simple Examples.....	1649
<i>Hisao Ishibuchi and Yusuke Nojima</i>	
Stability Analysis of Continuous PI-like Fuzzy Control Systems based on Vector Norms Approach	1655
<i>Anis Sakly, Basma Zahra and Mohamed Benrejeb</i>	
The fuzzy Induced Generalized OWA Operator and its Application in Business Decision Making	1661
<i>Jose M. Merigo and Anna M. Gil-Lafuente</i>	
Solution for Fuzzy Road Transport Traveling Salesman Problem Using Eugenic Bacterial Memetic Algorithm	1667
<i>János Botzheim, Péter Földesi and László Kóczy</i>	
Feature Selection Using Fuzzy Objective Functions.....	1673
<i>Susana Vieira, João M.C. Sousa and Uzay Kaymak</i>	
Clustering of Fuzzy Shapes by Integrating Procrustean Metrics and Full Mean Shape Estimation into K-Means Algorithm.....	1679
<i>Vasile Georgescu</i>	
Development of a Fuzzy Expert System for a Nutritional Guidance Application	1685
<i>Petri Heinonen, Marjo Mannelin, Hannu Iskala, Aki Sorsa and Esko Juuso</i>	
Possible and Necessary h-Indices	1691
<i>Marek Gagolewski and Przemysław Grzegorzewski</i>	
Similarity Based Fuzzy Interpolation Applied to CAGD.....	1696
<i>Joan Jacas, Amadeu Monreal and Jordi Recasens</i>	
KM-Fuzzy Approach Space.....	1702
<i>Juan Martínez-Moreno, Antonio Roldán and Concepcion Roldán</i>	
Decision Making in Competitive Location using Fuzzy Sets	1706
<i>Clara M. Campos, Lourdes Canós, María J. Canós, Vicente Liern, José A. Moreno and Dolores Santos</i>	
Using Syntactic Possibilistic Fusion for Modeling Optimal Optimistic Qualitative Decision.....	1712
<i>Salem Benferhat, Faiza Haned, Aïcha Mokhtari and Ismahane Zeddigha</i>	
A Fuzzy-Semiotic Framework for Modeling Imprecision in the Assessment of Depression	1717
<i>Mila Kwiatkowska, Krzysztof Kielan and Krzysztof Michalik</i>	
An Axiomactical Approach to T-Multi-indistinguishabilities	1723
<i>Javier Martín and Gaspar Mayor</i>	
Mining Linguistic Information for Configuring a Visual Surface Inspection System	1729
<i>David Martín, Domingo Miguel Guinea, Maria C. Garcia-Alegre and Domingo Guinea</i>	
A construction of an L-fuzzy valued measure of L-fuzzy sets.....	1735
<i>Vechislav Ruzha and Svetlana Asmuss</i>	

Distributed Genetic Tuning of Fuzzy Rule-Based Systems	1740
<i>Ignacio Robles, Rafael Alcalá, José Manuel Benítez and Francisco Herrera</i>	
Forecasting Exchange Rates: A Neuro-Fuzzy Approach	1745
<i>Meysam Alizadeh, Roy Rada, Akram Khaleghi Ghoshe Balagh and Mir Mehdi Seyyed Esfahani</i>	
Genetic Learning of Serial Hierarchical Fuzzy Systems for Large-Scale Problems	1751
<i>Alicia D. Benítez and Jorge Casillas</i>	
An Introduction to Parameterized IFAM Models with Applications in Prediction	1757
<i>Peter Sussner, Rodolfo Miyasaki and Marcos Eduardo Valle</i>	
Defining A Fuzzy Partition for Coarseness Modelling in Texture Images	1763
<i>Jesus Chamorro-Martinez, Pedro M. Martínez-Jimenez and Jose M. Soto-Hidalgo</i>	
A Fuzzy Particle Swarm Optimization Algorithm for a Cell Formation Problem	1768
<i>Esmail Mehdizadeh and Reza Tavakkoli-Moghaddam</i>	
Multiple Negations in Fuzzy Interval Logic	1773
<i>Eunjin Kim and Ladislav J. Kohout</i>	
Development of Multiple Linguistic Equation Models with Takagi-Sugeno Type Fuzzy Models	1779
<i>Esko Juuso</i>	
Knowledge Discovery in the Prediction of Bankruptcy	1785
<i>Rui Jorge Almeida, Susana Vieira, Viorel Milea, Uzay Kaymak and Joao Miguel Costa Sousa</i>	
Generalizations of Fuzzy C-Means Algorithm to Granular Feature Spaces, based on Underlying Metrics: Issues and Related Works	1791
<i>Vasile Georgescu</i>	
Enhancing OLAP Querying with the aid of H-IFS	1797
<i>Panagiotis Chountas, Ermir Rogova and Krassimir T. Atanassov</i>	
Modeling Investor Optimism with Fuzzy Connectives	1803
<i>Milan Lovric, Rui Jorge Almeida, Uzay Kaymak and Jaap Spronk</i>	
Tail Point Density Estimation Using Probabilistic Fuzzy Systems	1809
<i>Rui Jorge Almeida and Uzay Kaymak</i>	
Optimization of an Oil Production System using Neural Networks and Genetic Algorithms	1815
<i>Guillermo Jimenez de la C., Jose A. Ruz-Hernandez, Evgen Shelomov and Ruben Salazar M.</i>	
Rule Based Fuzzy Cognitive Maps in Socio-Economic Systems	1821
<i>Joao Paulo Carvalho and Jose Tome</i>	
Operational Semantics for a Fuzzy Logic Programming System with Defaults and Constructive Answers	1827
<i>Hannes Strass, Susana Muñoz-Hernández and Victor Pablos Ceruelo</i>	
Applying Bacterial Memetic Algorithm for Training Feedforward and Fuzzy Flip-Flop based Neural Networks	1833
<i>László Gál, János Botzheim, Laszlo T. Koczy and Antonio Ruano</i>	
Interactive Fuzzy Modeling by Evolutionary Multiobjective Optimization with User Preference	1839
<i>Yusuke Nojima and Hisao Ishibuchi</i>	
Incremental Possibilistic Approach for Online Clustering and Classification	1845
<i>Moamar Sayed Mouchaweh and Bernard Riera</i>	
Optimistic Fuzzy Weighted Average	1851
<i>Sylvie Galichet and Reda Boukezzoula</i>	

IFSA – EUSFLAT 2009

Evolving Inverse Fuzzy Models for Uncalibrated Visual Servoing in 3D Workspace1857
Paulo Goncalves, João Sousa and João Caldas Pinto

On the Reliability of the Color Gradient Vector Argument Approach1863
Belén Prados-Suarez, Pilar Sobrevilla, Eduard Montseny and Santiago Romani

Evolutionary Robot Vision and Fuzzy Evaluation for Natural Communication of Partner Robots.....1869
Akihiro Yorita and Naoyuki Kubota

Combining Wavelets and Computational Intelligence Methods with Applications on Multi-class Classification
Datasets1875
Carlos Campos Bracho

Poincaré recurrence theorem in MV-algebras.....1880
Beloslav Riečan

Notes on Q-probabilities on intuitionistic fuzzy events1882
Magdaléna Renčová

A New Bridge Between Fuzzy Sets and Statistics
Pedro Teran

L-Prime Spectrum of Modules.....
Bayram Ali Ersoy and Dan Ralescu