

Sunday, 4 July 2004

16 - 19 Registration  
(Dipartimento di Matematica e Informatica – entrance hall)

Monday, 5 July 2004

8 - 9.30 Registration  
(Dipartimento di Matematica e Informatica – entrance hall)

9.30 *Opening (room: AULA MAGNA)*

Plenary sessions

10 - 11 *Chair: B. Bouchon-Meunier Room: AULA MAGNA*  
**L.A. Zadeh** **Toward a unified theory of uncertainty**

*Coffee Break*

11.30 -12.30 *Chair: C. Tijus Room: AULA MAGNA*  
**G. Gigerenzer** **Fast and Frugal Heuristics**

*Lunch*

Parallel sessions

*Databases*

14.30- 16.15 *Chair: D. Laurent Room: A0*

Non Monotonic Aggregates Applying to Fuzzy Sets in Flexible Querying  
*P. Bosc, L. Liétard*

Bitmap techniques for the modeling of fuzzy spatial data  
*J. Verstraete, R. De Caluwe, G. De Tré, A. Hallez*

Introducing  $\lambda$ -Specialization into the Fuzzy EER Model  
*Guoqing Chen, Ling Lin, Xunhua Guo*

Extending object-role modeling for fuzzy conceptual queries  
*A. Rosado, R. A. Ribeiro*

*Fuzzy measures and integrals: theory and applications* (organizer M. Grabish)

14.30- 16.15 *Chair: M. Grabish Room: A2*

Characterizations of probabilistic and cardinal-probabilistic interaction indices  
*K. Fujimoto, I.Kojadinovic, J-L Marichal*

Canonical Sequences of Fuzzy Measures  
*A. G. Bronevich*

A general approach to integration on finite sets  
*E.P. Klement, R. Mesiar, E. Pap*

Interaction transform for bi-capacities  
*F. Lange, M. Grabisch*

*Multicriteria Decision Making*

14.30-16.15 *Chair: M. Detyniecki Room: B3*

Modeling prioritization in multi-criteria decision making  
*R. Yager*

Intelligent Multiattribute Decision Support Model For Triage  
*J. San Pedro, F. Burstein, L. Churilov, J.Wassertheil, P. Cao*

An interval-valued, 2-additive Choquet Integral for Multi-criteria Decision Making  
*M. Ceberio, F. Modave*

A Linguistic Hierarchical Decision Making Model for Evaluating Engineering Systems  
*L. Martínez, Jun Liu, Jian-Bo Yang, F. Herrera*

*Role of Fuzzy Logic in Soft Computing* (organizer H.F. Wang)

14.30- 16.15 *Chair: H.F. Wang Room: A3*

A Learning Algorithm of L-R Fuzzy Numbers by a Fuzzy Neural Network  
*Ching-Yi Kuo, Hsiao-Fan Wang*

Investigation of Cross-selling Problem By Using Data Mining in Uncertain Environment  
*Long-Shuh Lin*

A Generalized Fuzzy Ranking Procedure  
*Miao-Ling Wang*

Descriptive Data Mining Based on  $c_{\sim}$ -Fuzzy Means Method  
*Hsiao-Fan Wang*

Uncertainty in Robotics (organizer L. Magdalena)

14.30- 16.15 Chair: L. Magdalena Room: C3

A Methodology for Acquiring Qualitative Knowledge for Probabilistic Graphical Models

U. B. Kjærulff, A.L. Madsen

Fuzzy-based System for Intelligent Diagnosis of Motion Problems on Ground Robots

L. Magdalena, M.I A. Sotelo, S. Guillaume, L. M. Bergasa, J. M. Alonso

Fuzzy Self-Localization using Natural Features on an AIBO Robot

D. Herrero Pérez, H. Martínez Barberá, A. Saffiotti

A Novel Fuzzy Kalman Filter for Mobile Robots Localization

F. Matia, A. Jimenez, D. Rodriguez-Losada, B. M. Al-Hadithi

Coffee Break

Aggregation

16.45-18 Chair: S. Ovchinnikov Room: A0

OWA aggregation on an interval argument and operative values

R. Yager

On bi-capacity-based concordance rules in multicriteria decision making

A. Rolland

Ordinal Sorting in the Presence of Interacting Points of View: TOMASO

P. Meyer, M. Roubens

Approaches to extending Description Logics for representation of uncertain knowledge (organizer H.L. Larsen)

16.45-18.30 Chair: H.L. Larsen Room: B3

pDAML+OIL: A probabilistic extension to DAML+OIL based on probabilistic Datalog

H. Nottelmann, N.Fuhr

Probabilistic Role Models and the Guarded Fragment

M. Jaeger

The Subsumption Problem of the Fuzzy Description Logic  $ALC_{FH}$

S. Hölldobler, H-P Störr, T.Dinh Khang, N. Hoang Nga

Uncertainty in Description Logics: a Lattice-based Approach

U. Straccia

Classification

16.45-18.30 Chair: M. Rifqi Room: A3

A Tree-structured Classification Model Based on Label Semantics

Zengchang Qin, Jonathan Lawry

Hybrid Feature Selection instead of Ensembles of Classifiers in Medical Decision Support

S.B. Kotsiantis, P. E. Pintelas

A Fast Ensemble of Classifiers

S.B. Kotsiantis, P. E. Pintelas

Meta-Learning and Knowledge-Based Strategies: New Trends of Inductive Learning

C. Castiello, G. Castellano, A. M. Fanelli

Decision making support

16.45-18.30 Chair: P. Bonissone Room: A2

Modeling Compensation in Fuzzy Rules

C. Labreuche, P. Savéant

An Approach to the Analytic Hierarchy Process Using a Fuzzy Reciprocal Matrix

Shin-ichi Ohnishi, D. Dubois, H. Prade

Automating the Quality Assurance of an On-line Knowledge-Based Classifier By Fusing Multiple Off-line Classifiers

P. Bonissone

Estimation of the Random Index in the Analytic Hierarchy Process

J- A Alonso, M. T. Lamata

Uncertainty in Robotics (organizer L. Magdalena)

16.45-18 Chair: L. Magdalena Room: C3

Evolutionary design of a fuzzy controller for behaviors in mobile robots navigation

M. Mucientes, D.L. Moreno, C.V. Regueiro, A. Bugarin, S.Barro

A Fuzzy Constraint Satisfaction Approach for Landmark Recognition in Mobile Robotics

*A. Otero, C. V. Regueiro, M. Rodriguez, J. Correa, P. Félix*

Mobile Robot Map-Based Localization using approximate locations and the Extended Kalman Filter

*E. Aguirre, A. Gonzalez, R. Munoz*

19:00

*Welcome party*

Tuesday, 6 July 2004

Plenary session

9 - 10

*Chair: G. Coletti*

*Room: AULA MAGNA*

**P. Dawid**

**Probability and Statistics in the Law**

Parallel sessions

*Aggregation operators and measures (organizers: T. Calvo and R. Mesiar)*

10- 11.15

*Chair: T. Calvo*

*Room: AULA 8*

Aggregation of Bi-Capacities

*S. Saminger*

Aggregation operators based on several classes of symmetric fuzzy measures

*T. Calvo, J. Martin, G. Mayor*

Meta-Knowledge Choquet integral and bicapacity models: links and relations

*Y. Narukawa, V. Torra*

*Classification*

10- 11.15

*Chair: E. Huellermeier*

*Room: SALA DESSAU*

Statistical Properties of Generalized Discrepancies and Related Quantities

*C. Choirat, R. Seri*

Bias - variance tradeoff of soft decision trees

*C. Olaru, L. Wehenkel*

Fuzzy Classifiers for Imbalanced, Complex Classes of Varying Size

*S. Visa, A. Ralescu*

*Preference Models*

10- 11.15

*Chair: I. Perfilieva*

*Room: AULA E*

Consistency Properties for Preference Relations: T-additive and T-multiplicative transitivity

*F. Chiclana, E. Herrera-Viedma, F. Herrera*

Dynamic Decision Making based on Fuzzy Preferences

*Yuji Yoshida, Masami Yasuda, Jun-ichi Nakagami, Masami Kurano, Satoru Kumamoto*

Aggregation of Preferences Based on FSAM

*Dae-Young Choi*

Probability

10- 11.15 Chair: R. Scozzafava Room: AULA 7

Approximating Probability Density Functions with Mixtures of Truncated Exponentials

*B. R. Cobb, P. P. Shenoy, R. Rumi*

Conditional measures and joint distributions on MV-algebras

*M. Kalina, O. Nánásiová*

What is the Proper Propositional Base for Probabilistic Logic?

*Z. Marković, Z. Ognjanović, M. Rašković*

T-norm based fuzzy logics (organizers: L. Godo and F. Esteva)

10- 11.15 Chair: L. Godo Room: AULA MAGNA

Many-valued logics and similarities

*B. Gerla, I. Leuştean*

On definability of additive connectives in fuzzy logics

*A. García-Cerdaña, C. Noguera, F. Esteva*

A logical and algebraic treatment of conditional probability

*T. Flaminio, F. Montagna*

*Coffee Break*

Aggregation operators and measures (organizers: T. Calvo and R. Mesiar)

11.45-13 Chair: T. Calvo Room: AULA 8

Weakening Lebesgue measurability for lattice-valued possibilistic measures

*I. Kramosil*

On Interpretation of Possibility Distributions as Sets of Dominated Distribution Functions

*T. Kroupa*

The Choquet integral as a linear interpolator

*M. Grabisch*

Fuzzy Theory

11.45-13 Chair: T. Martin Room: SALA DESSAU

Point-free ultrametric spaces and the category of fuzzy subsets

*G. Gerla, C. Coppola, T. Pacelli*

Decision making with fuzzy ternary relations

*S. Ovchinnikov*

Fuzzy and weak solutions to differential equations

*M. Oberguggenberger*

Preference Models

11.45-13 Chair: I. Perfilieva Room: AULA E

Consistency of crisp and fuzzy preference relations

*J-L. García Lapresta, J. Montero*

Comparison of Ranking Procedures in Pairwise Preference Learning

*E. Hüllermeier, J. Fürnkranz*

On the decomposition of min-transitive preference relations

*S. Díaz, B. De Baets, S. Montes*

Probability

11.45-13 Chair: R. Scozzafava Room: AULA 7

A weak law of large numbers for coherent lower previsions

*G.de Cooman, E. Miranda*

Management of uncertainty orderings through ASP

*A. Capotorti, A. Formisano*

An extension of Incidence calculus theory

*Guilin Qi*

T-norm based fuzzy logics (organizers: L. Godo and F. Esteva)

11.45-13 Chair: L. Godo Room: AULA MAGNA

On some substructural aspects of t-norm based logics

*F. Bou, A. García-Cerdaña, V. Verdu*

Lipschitz Continuity and Extensionality of Functions Represented by BL-algebra Formulas

*I. Perfilieva*

On Rational Gödel and Nilpotent Minimum Logics  
*F. Esteva, L. Godo, C.Noguera*

Lunch

Bio-Medical Applications

14.30-16.15 Chair: *D.L. Hudson* Room: A3

Efficient and Robust Global Amino Acid Sequence Alignment with Uncertain Evolutionary Distance  
*M. C. M. Troffaes*

Consequential Reasoning in Medical Decision Support Systems  
*D. L. Hudson, M. E. Cohen*

Determination of Membership Functions for the identification of degrees of chaos in biomedical signals  
*M.E. Cohen, D.L.Hudson*

Decision theory issues for supporting therapy selection in computerized guidelines  
*S. Montani, P.Terenziani*

Fuzzy measures and integrals: theory and applications (organizer: M. Grabish)  
14.30-16.15 Chair: *M. Grabish* Room: A2

*k*-intolerant capacities and Choquet integrals  
*J-L Marichal*

Determination of the criteria to be improved first in order to improve as much as possible the overall evaluation  
*C. Labreuche*

Elucidation and risk expressions of a movie recommendation based on a multi-criteria aggregation with a Choquet integral  
*A. Akharraz, J. Montmain, G. Mauris*

On some results of the set of dominating *k*-additive belief  
*P.Miranda, M. Grabisch, P. Gil*

Fuzzy Modelling

14.30-16.15 Chair: *B. Turksen* Room: A0

Indistinguishability Operators generated by Prototypes  
*J. Jacas, J. Recasens*

Preliminary Investigations into Modelling the Variation in Human Decision Making  
*T. Ozen, J.M. Garibaldi, S. Musikasuhan*

On Some Analogy between Multistate System and Fuzzy Measure Based Reliability Models  
*M. Oussalah*

Automatic Generation of Fuzzy Rules and Its Applications in Medical Diagnosis  
*M. Navara, D. Peri*

Metaheuristics and Soft Computing (organizers: J.Verdegay and D. Pelta)

14.30-16.15 Chair: *J. Verdegay* Room: C3

Soft computing-based heuristics for the fuzzy *p*-median problem  
*M. J. Canos, C.Ivorra, V. Liern*

Fuzzy Stopping Rules for the Strip Packing Problem  
*J. D. Beltrán, J. E. Calderón, R. J. Cabrera, J. A. M. Perez, J. M. Moreno-Vega*

An Optimization Strategy based on Fuzzy Rules  
*David A. Pelta, Alejandro Sancho-Royo, Jose-L. Verdegay*

A Decision Support System for portfolio selection based on Soft Computing  
*L. Teresa, L. Vicente, M. Paulina*

Uncertainty and Defuzzification (organizer: D. Ralescu)

14.30-16.15 Chair: *D. Ralescu* Room: B3

Deterministic Models in Sensors affected by Uncertainties  
*V. E. Balas*

Models of Uncertainty for Knowledge Representation  
*D. Ralescu*

Experiments in Piecewise Linear Approximation of Nonlinear Class Boundaries using Support Vector Machines

*R. Kamei, A. Ralescu*

Decomposition of Specializations

*E. Roventa, T. Spiricu*

**POSTER SESSION**

14.30-18.50 Room: Dipartimento di Matematica e Informatica

On the Use of Parametric Diagrams to Deal with Uncertainty in Multi-Criteria Problems

*A.C. Henggeler*

A Sentence Classification Method by Using Intention Association Expressions

*A. Elsayed, Jun-ichi Aoe, Yuki Kadoya, Shinkaku Kashiji*

A Time Priority Information for Determining Important E-mail Messages

*A. Elsayed, Jun-ichi Aoe, Yuki Kadoya, Kazuhiro Morita, Toru Sumitomo, Shinkaku Kashiji*

New product portfolio selection using fuzzy logic

*Ching-Torng Lin*

A fuzzy-based evaluation tool for assessing software artifacts

*G. Canfora, L. Cerulo, R. Preziosi, L. Troiano*

Opening and Closing Operators in Fuzzy Morphology Using Conjunctive Uninorms

*M. Gonzalez, D. Ruiz, J. Torrens*

A student model constituted with different Bayesian networks

*M. Hibou, J-M Labat*

Combining Categories in Nursing Assessment using Interval Valued Fuzzy Sets

*R. John, S. Lake, K. Wills*

Pattern Mining as a Clique Extracting Task

*K. Rein, G. Lind, L. Vöhandu*

Investigation of Chaos in Recurrent Fuzzy Models

*A. Sokolov, M. Wagenknecht*

Process Modelling: Challenges and Applications

*A. J. Grichnik, M. Seskin*

*Coffee Break*

Data Mining

16.45-18.50 Chair: C. Marsala Room: A2

Analysis of Adaptive-H-Struct: An Algorithm for Mining Generalized Association Rules

*T. H. Soliman, M. F. Tolba, A. Salem, A. Hamad*

A Comparison of Operators in fuzzy Knowledge Discovery

*M. Bernadet*

Mining Generalized Knowledge from Imperfect Data

*R. A. Angryk, F. E. Petry*

A Cost-Efficient Model for Ubiquitous Data Stream Mining

*M. M. Gaber, A. Zaslavsky, S. Krishnaswamy*

Sequential Patterns Modeling and Graph Pattern Mining

*Jing Lu, Osei Adjei, Xiaofeng Wang, Fiaz Hussain*

Evolutionary algorithms

16.45-18.50 Chair: A. Milani Room: B3

Model for Measuring Quality of Software in DVRS using the Gap Concept and Fuzzy Schemes with GA

*Chie-Bein Chen, Chun-Hsien Wang*

Improving Genetic Algorithms with Viruses: a case study

*V. Cutello, F. Pappalardo*

UMDAT: a univariate EDA in continuous domains based on the triangular and TSP distributions

*M. J. Flores, J. A. Gamez, J. M. Puerta*

Evolutionary strategies to achieve knowledge in faded temporal fuzzy logic controllers applied to adaptive distributed routing

*M. A. Gadeo Martos, J. R. Velasco Pérez*

Feature selection using bacterial optimization

*J. Botzheim, M. Drobnics, L.T. Kóczy*

Logic Programming with imperfect information (organizer: P. Vojtas)

16.45-18.50 Chair: P. Vojtas Room: A0

Sorted Monotonic Logic Programs and their Embeddings

*C. V. Damasio, L. M. Pereira*

Soft Computing, Logic Programming and the Semantic Web

*T. P. Martin*

Multi-Adjoint Logic Programming

*J. Medina, M. Ojeda-Aciego*

Learning first order fuzzy rules with their implication operator

*M. Serrurier, H. Prade, T. Sudkamp, D. Dubois, G. Richard*

Transformation of deductive and inductive tasks between models of logic programming with imperfect information

*P. Vojtas, M. Vomlelova*

Possibility theory

16.45-18.50 Chair: G. De Cooman Room: A3

Independence in Conditional Possibility Theory

*G. Coletti, B. Vantaggi*

On V-projections of Possibility Distributions

*J. Vejnarova*

Uncertainty analysis of environmental impact assessment inferences: a possibilistic approach

*Benetto, Dujet*

Joint Treatment of Imprecision and Randomness in Uncertainty

*C. Baudrit, D. Dubois, D. Guyonnet, H. Fargier*

Qualitative Classification with Possibilistic Decision Trees

*N. Ben Amor, S. Benferhat, Z. Elouedi*

Rough Sets: Methods and Applications (organizers: L. Polkowsky and J. Grzymala-Busse)

16.45-18.50 Chair: L. Polkowsky Room: C3

Classification- versus Approximation-oriented Fuzzy Rough Sets

*M. Inuiguchi*

Visualization of Rough Classification using Multidimensional Scaling

*Shusaku Tsumoto, Shoji Hirano*

Rough Clustering

*Shoji Hirano, Shusaku Tsumoto*

Concerning Granular Computing Based on Archimedean Rough Inclusions

*L. Polkowski*

Rough Set Approaches to Rule Induction from Incomplete Data

*J. W. Grzymala-Busse, S. Siddhaye*

Wednesday, 7 July 2004

Plenary session

Chair: R.R. Yager

Room: AULA MAGNA

9 - 10

**R. Casadio**

**Machine learning and the prediction of protein structure: the state of the art**

Parallel sessions

*Bipolarity in reasoning and decision* (organizer: D.Dubois and E. Prade)

10- 11.15 Chair: D. Dubois Room: AULA MAGNA

Bipolarity in reasoning and decision - An introduction. The case of the possibility theory framework  
D. Dubois, S. Kaci, H. Prade

A psychological study of bipolarity in the possibilistic framework  
R. da Silva Neves, E. Raufaste

Positive and Negative Reasons in Interval Comparisons: Valued PQI Interval Orders  
M. Öztürk, A. Tsoukiàs

*Fusion*

10- 11.15 Chair: A.Hunter Room: AULA E

Information evaluation in Fusion: a case study  
L. Cholvy

Application of Uncertainty-Based Methods to Fuse Language Identification Expert Decisions  
J. Gutiérrez, J-L Rouas, R. Andre-Obrécht

Logical reasoning with multiple granularities of uncertainty in semi-structured information  
A. Hunter, Weiru Liu

*Fuzzy logic in the semantic web: a new challenge* (organizer: E. Sanchez)

10- 11.15 Chair: E. Sanchez Room: SALA DESSAU

Fuzzy Techniques for Metadata Construction  
P. Ceravolo, E. Damiani, B. Oliboni

Acquisition of Soft Taxonomies  
T. P. Martin, B. Azvine, B. Assadian

Fuzzy Logic and the Semantic Web  
E. Sanchez, T. Yamanoi

*Probabilistic Methods: Non-Graphical Tools and Approaches* (organizer: R. Jirousek and M. Studeny)

10- 11.15 Chair: M. Studeny Room: AULA 7

Coherence conditions for generalized probability assessments  
V. Biazzo, A. Gilio

Nonconglomerative Coherent Conditional Probabilities  
G. Coletti, R. Scozzafava

On Relation of Compositional and Decomposable Models  
R. Jiroušek

*Special classes of Aggregation operators* (organizers: T. Calvo and R. Mesiar)

10- 11.15 Chair: R. Mesiar Room: AULA 8

Discrete Copulas and Sklar's Theorem  
G. Mayor, J. Suñer, J. Torrens

Conditional distributivity for a uninorm and a continuous t-conorm  
D. Ruiz, J. Torrens

Copulas and quasi-copulas in a class of aggregation functions  
M. Mas, M. Monserrat, J. Torrens

Coffee Break

*Bipolarity in reasoning and decision* (organizer: D.Dubois and E. Prade)

11.45 -13 Chair: D. Dubois Room: AULA MAGNA

Learning Decision Rules from Positive and Negative Preferences  
E. Hüllermeier, J. Beringer

Preference structures: first-order characterization and modal logic  
P. Balbiani, D. Vakarelov

On the Relationship Between Qualitative Choice Logic and Possibilistic Logic  
S. Benferhat, G. Brewka, D. Le Berre

*Belief functions*

11.45 -13 Chair: P.Smets Room: AULA 7

Belief function theory on the continuous space with an application to model based classification  
B. Ristic, P.Smets



Extending consonant approximations to capacities  
*P. Baroni*

Consistency of Probabilistic Transformations of Belief Functions  
*M. Daniel*

Bio-Medical Applications

11.45 -13.25 *Chair: S. Sandri Room: SALA DESSAU*

Importance of Monitoring in Developing Optimal Control Policies for Probabilistic Boolean Genetic Networks  
*O. Abul, R. Alhajj, F. Polat*

Ordering manifestations for investigation in incomplete diagnosis  
*S. Massruhá, S. Sandri, J. Wainer*

Biomedical Data Classification Using Randomized Feature Selection and Parallelized Multi-Layer Perceptrons  
*N. J. Pizzi, R. L. Somorjai, W. Pedrycz*

Dominance of recognition of words presented on right or left eye  
*Takahiro Yamanoi, Toshimasa Yamazaki, J-L Vercher, E. Sanchez, M. Sugeno*

Uncertainty models

11.45 -13.25 *Chair: A. Capotorti Room: AULA E*

Some Measures of Fuzzy Entropy and Their Properties  
*Om Parkash, P.K. Sharma*

On a collector of  $\wedge$ -compositive informations  
*D. Vivona, M. Divari*

Ontological Grounding of Fuzzy Theory: Break Down of Equivalences  
*I. Burhan Türkşen*

Using Probabilistic Measures of Uncertainty for Solving Linear Programs  
*S. Guíasu*

Special classes of Aggregation operators (organizers: T. Calvo and R. Mesiar)

11.45 -13.25 *Chair: R. Mesiar Room: AULA 8*

Copulas and the Pairwise Probabilistic Comparison of Ordered Lists  
*B. De Baets, H. De Meyer*

Construction of t-norms based on an example of P. Hajek  
*A. Mesiarova*

Representation of continuous triangular subnorms  
*R. Ghiselli Ricci*

Ordinal sums in L\*-fuzzy set theory  
*G. Deschrijver, E. E. Kerre*

Epistemology

13 -13.40 *Chair: J. Mendel Room: AULA 7*

Randomization and Uncertain Inference  
*H. E. Kyburg, Jr., Choh Man Teng*

Creativity as an Uncertain Environment's Fertile Representation Ability: Some Ways to Explore  
*J. Degraevl*

Lunch

15.00 -17.00

EUSFLAT assembly (room A0)

Thursday, 8 July 2004

Plenary session

Chair: L. Koczy

Room: AULA MAGNA

9 - 10

**J. Bezdek**

**Approximate Clustering in Very Large  
Normal Mixtures**

Parallel sessions

*Aggregation operators and applications* (organizers: T. Calvo and R. Mesiar)

10- 11.15 Chair: G. Mayor

Room: AULA 8

Lexicographical Aggregation of Fuzzy Criteria  
*M. Mareš*

Some new results on recursive aggregation rules  
*D. Gómez, J. Montero*

Aggregation on finite ordinal scales by scale independent functions  
*J-L Marichal, R. Mesiar*

*Fuzzy measures and integrals: theory and applications* (organizer: M. Grabish)

10- 11.15 Chair: M. Grabish

Room: Sala Dessau

The Calculation of Choquet Integrals with Fuzzy-Valued Integrand  
*R. Yang, Z. Wang, P-A Heng, K-S Leung*

Genetic Algorithms with a Bleeding Algorithm for Solving the Inverse Problem of Indeterminate Integrals  
*Zhenyuan Wang, Kebin Xu, Pheng-Ann Heng, Kwong-Sak Leung*

On m-dimensional distorted probabilities and p-symmetric fuzzy measures  
*Yasuo Narukawa, Vicenç Torra*

*Probabilistic Methods: Non-Graphical Tools and Approaches* (organizers: R. Jirousek and M. Studeny)

10- 11.15 Chair: R. Jirousek

Room: AULA 7

Enumerating Equivalence Classes of Bayesian Networks by Perfect Sequences  
*G. D. Kleiter*

On the implication problem for factorizations of discrete probability distributions  
*F. M. Malvestuto, A. De Sanctis*

Maximization of Information Divergences Related to Binary i.i.d. Sequences  
*F. Matús*

*Soft Approaches to Information Access and Retrieval on the Web* (organizers: G. Pasi and E. Herrera-Viedma)

10- 11.15 Chair: E. Herrera-Viedma Room: AULA MAGNA

A Model of a Fuzzy Multi-Granular Linguistic IRS  
*E. Herrera-Viedma, O. Cordón, M. Luque, A.G. López*

Ontology Constructor Agent for improving Web Search with GUMSe  
*J. A. Olivas, J. de la Mata, J. Serrano-Guerrero*

Automatically Attaching Web Pages to an Ontology  
*R. Villa, R. Wilson, F. Crestani*

*Theory and Applications of intuitionistic fuzzy sets* (organizers: I. Kacprzyk & E. Szmidt)

10- 11.15 Chair: I. Kacprzyk

Room: AULA E

New Operators over Intuitionistic Fuzzy sets  
*K. T. Atanassov*

Triangle and square: a comparison  
*G. Deschrijver, C. Cornelis, E. E. Kerre*

Discrete Intuitionistic Fuzzy Sets  
*A. I. Ban*

Coffee Break

*Aggregation operators and applications* (organizers: T. Calvo and R. Mesiar)

11.45-12.35 Chair: G. Mayor

Room: AULA 8

Aggregation and defuzzification of fuzzy quantities  
*T. Calvo, R. Mesiar*

On Aggregating Second-Level Software Estimation Cost Drivers: A Usability Cost Estimation Case Study  
*J. Crespo, M- A Sicilia, J-J Cuadrado*

*Reasoning/Inference*

11.45-13 Chair: S. Benferhat

Room: SALA DESSAU

Approximate Reasoning with Fuzzy Booleans  
*P.M. van den Broek, J.A.R. Noppen*

Approximate Reasoning and Negative Sentences  
*M. El-Sayed, D. Pacholczyk*

Similarity-based fuzzy interpolation method

*F. Esteva, M. Rifqj, B. Bouchon-Meunier, M. Detyniecki*

*Probabilistic Methods: Non-Graphical Tools and Approaches* (organizers: R. Jirousek and M. Studeny)

11.45-13 Chair: R. Jirousek Room: AULA 7

An Empirical Comparison of Score Measures for Independence

*S. Moral*

Identifying a cause in models which are not simple Bayesian networks

*E. Riccomagno, J. Q. Smith*

Structural imsets: an algebraic method for describing conditional independence structures

*M. Studeny*

*Soft Approaches to Information Access and Retrieval on the Web* (organizers: G. Pasi and E. Herrera-Viedma)

11.45-13 Chair: E. Herrera-Viedma Room: AULA MAGNA

A novel probabilistic quantifier fuzzification mechanism for information retrieval

*F. Díaz- Hermida, D. E. Losada, A. Bugariń, S. Barro*

*A new similarity measure for effectiveness in fuzzy information retrieval*

*I.J. Blanco, M.J. Martń-Bautista, D.Sáchez, M.A.Vila*

On the use of linguistic summaries for text categorization

*S. Zadrozny, J. Kacprzyk*

*Theory and Applications of intuitionistic fuzzy sets* (organizers: I. Kacprzyk and E. Szmidt)

11.45-13.25 Chair: E. Szmidt Room: AULA E

Similarity of Intuitionistic Fuzzy Sets and the Jaccard Coefficient

*E. Szmidt, J. Kacprzyk*

The Generalized Spearman's Rank Correlation Coefficient

*P. Grzegorzewski*

On the Entropy of Intuitionistic Fuzzy Sets and Interval-Valued Fuzzy Sets

*P. Grzegorzewski, E. Mrówka*

*Contradiction in Intuitionistic Fuzzy Sets*

*S. Cubillo, E. Castińeira*

Lunch

*Information retrieval*

14.30-16.15 Chair: E. Roventa Room: A0

An integrated system for qualitative information retrieval and pattern recognition in a seismogram archive

*C. Chiaruttini, A. Soranzio*

A Region-Similarity-Based Image Retrieval System

*J.F. Omhover, M. Detyniecki, B. Bouchon-Meunier*

A High-Speed Dynamic Method Using Efficient Block Management Structure

*El-Sayed Atlam, Masuo Fuketra, Masaki Oono, Jun-ichi Aoe*

A framework for a personalized advertising on Web based on maximal fuzzy similarity in Lukasiewicz structure

*C. Morici, R. Niewiadomski*

*Information theory and aggregation operators* (organizers: A.Sgarro and S.Termini)

14.30-16.15 Chair: S.Termini Room: A3

On the Distributivity between Uni-Norms

*V. Doldi, C. Bertoluzza, G. Naval*

Measures of Information for Inductive Learning

*Thanh-Ha Dang, B. Bouchon-Meunier, C. Marsala*

Fuzzy Integrals and Error Correction in a Telephone Network with Sensitive Users

*A. Sgarro, L. Bortolussi*

Steps to a Definition of Information Dynamics

*S. Termini*

*Intelligent methods for image and pattern recognition* (organizer: A. Ralescu)

14.30-16.15 Chair: A. Ralescu Room: B3

Fuzzy Hamming Distance as Image Similarity Measure

*M. Ionescu, A. Ralescu*

Reinforcement of a Support Vector Classifier - Toward a Framework of Perceptual Information Processing

*J. Mill, A. Inoue*

Integration of Fuzzy Structural Information in Deformable Models

*O. Calliot, O. Camara, I. Bloch*

Context-based Modeling of Planar Shapes - Application to Classification of Geological Particles

*W. Tembe, A. Ralescu*

Management of large scale complex data sets (organizer A. Laurent)

14.30- 16.15 Chair: *A. Laurent* Room: A2

Land Cover Change Detection: a Quality-aware and semantic-based approach

*R. Jeansoulin, T.T. Pham, A.J. Comber*

A Conditional Fuzzy Clustering with Adaptive Method

*A. Elmzabi, M. Bellafkih, M. Ramdani, K. Zeitouni*

Comparing Concept-based and Statistical Representations for Textual Categorization

*S. Jaillet, M. Teisseire, G.Dray, M.Plantié*

Summarizing Multidimensional Databases Using Fuzzy Rules

*Y.W. Choong, P. Maussion, A. Laurent, D. Laurent*

Time & Forecasting

14.30-16.40 Chair: *F. Esteva* Room: C3

An Hybrid Fuzzy Temporal Constraint Approach: a Case Study

*S. Badaloni, M. Giacomini, M. Falda*

An Investigation into the Effect of Number of Model Parameters on Performance in Type-1 and Type-2 Fuzzy Logic Systems

*S. Musikasawan, T. Ozen, J. M. Garibaldi*

Obtaining Temporal Fuzzy Chains from Temporal Fuzzy Models

*J. M. Garcia, C. Gonzalez, L. Jimenez, J.J. Castro-Schez*

Automated Identification of Political Conflicts with a Scenario Recognition Technique

*L. Mouillet, B. Bouchon\_Meunier, E. Collain*

A Viable Modelling Approach for Risk Assessment in Uncertain Environments

*J. Mattioli, F-X Josset*

Coffee Break

Applications of Fuzzy Logic to Signal and Image Processing (organizer: J. Gutierrez-Rios)

16.55-19.15 Chair: *J. Gutierrez-Rios* Room: A0

Fuzzy-Inference-Based Robust Beamforming

*A. Morell, N. Martin, A. I. Pérez Neira*

Motion Adaptive Fuzzy Video De-interlacing method based on Convolution Techniques

*J. Gutiérrez-Ríos, F. Fernández Hernández, J. C. Crespo, G. Triviño*

Motion Adaptive Video Deinterlacing Using One Dimensional Fuzzy FIR Filters

*A. Sanz, F. Fernández, J. Gutiérrez, G. Triviño, A. Sanchez, J.C. Crespo, A. Mazadiego*

Hardware Implementation of a De-interlacing Video Algorithm Using Programmable Logic Devices

*P. Brox, S. Sánchez-Solano, I. Baturone, A. Barriga*

Automobile driving style estimation using fuzzy logic

*G. Triviño Barros, N. Cañas de Paz*

A Fuzzy Approach to Object Detection in Maritime Color Images

*E. Montseny, P. Sobrevilla, S. Romani (moved here from "Image Processing" on Fri.9)*

Bayesian Networks

16.55-19.00 Chair: *B. Vantaggi* Room: B3

Improving the K2 Algorithm Using Association Rule Parameters

*E. Lamma, F. Riguzzi, S. Storari*

On the Sensitivity of Probabilistic Networks to Reliability Characteristics

*L. C. van der Gaag, S. Renooij*

Featuring Multiple Local Optima to Assist the User in the Interpretation of Induced Bayesian Network Models

*J.M. Peña, T. Kočka, J. D. Nielsen*

The Practicability of Situational Signs for QPNs

*J. H. Bolt, L. C. van der Gaag, S. Renooij*

Measure Based Approximate Conditional Independence: Approximate Semi-Graphoids and Independence Mappings

*D. Ślęzak*

EvidenceTheory

16.55-19.00 Chair: *M. Daniel* Room: A3

A Generic Rule for Combination of Uncertain Information in the Framework of Evidence Theory

*E. Marashi, J. P. Davis*

Addition and Subtraction of Beliefs

*D. McAnally, A. Josang*

Dynamic team performance: the effects of information richness and decision strategies

*C. Brønn*

Simplicial complexes of finite fuzzy sets

*F. Cuzzolin*

Rough operations on Boolean Algebra

*Guilin Qi, Weiru Liu*

*Intelligent Information Systems* (organizers: M. J. Martin-Bautista and O. Ponds )

*Chair: M. J. Martin-Bautista*

16.55-19.00 *and O. Ponds*

*Room: A2*

Reducing Main Components of  $k$ -Disjunction Free Representations of Frequent Patterns

*M. Kryszkiewicz*

On a Strong Representation System for Imprecise Relational Databases

*P. Bosc, O. Pivert*

Fuzzy Object Management in an Object-Relational Framework

*J.C. Cubero, N. Marín, J.M. Medina, O. Pons, M.A. Vila*

A fuzzy set approach to concept-based information retrieval

*M. Boughanem, G. Pasi, H. Prade*

Using Soft-Computing for e-mail Management

*F. P. Romero, J. A. Olivas, P. J. Garcés*

*Sub-measures on MV-algebras* (organizer: B. Riečan)

16.55-19.00 *Chair: B. Riečan* *Room: C3*

On the Dobrakov  $g$ -submeasure

*K. Lendelová*

On the extension of measures from MV-algebras to the corresponding  $l$ -groups

*M. Jurečková*

Extension theorem for subadditive measures in MV-algebras

*B. Riečan*

Ito formula in Riesz spaces

*A. Boccuto, D. Candeloro*

Kondurar Theorem in Riesz spaces

*A. Boccuto, D. Candeloro*

*Banquet*

Friday, 9 July 2004

Plenary session

9 - 10  
Chair: Z. Wang Room: AULA MAGNA  
J. Aczel Entropies Old and New (and Both New and Old) and Their Characterizations

Parallel sessions

Business-Applications

10- 11.15 Chair: O. Pons Room: AULA E

Design of a merchant broker agent based on fuzzy logic as mediator in e-commerce  
J.J. Castro-Schez, R. Manjavacas, J.L. Castro, J. Moreno

Fuzzy Treatment of American Call Options  
L. Spircu , T. Spircu

A Hybrid Inference Network for Bilateral Bargaining  
J. Debenham

Logic

10- 11.15 Chair: S. Tulipani Room: AULA 7

An empirical complexity study for a 2CPA solver  
M. Bairoletti, A. Capotorti, P. Tiberi, S. Tulipani

Partially ordered monads and powerset Kleene algebras  
P. Eklund, W. Gahler

The new theory of fuzzy sets based on Syntactic Structured and Semantic Convex ( $S^3C$ ) logic  
D. Radojević

Image Processing

10- 11.15 Chair: I Bloch Room: AULA 8

A Fuzzy Approach to Object Detection in Maritime Color Images  
E. Montseny, P. Sobrevilla, S. Romani (moved to "Intell. meth. for image and pattern rec." on Thu.8)

Baysian Estimation to Compute Iterative Fractal Systems with Probability for Image Compression  
M.Discepoli, I. Gerace, R. Pandolfi

Image Enhancement Method Using a New Measure for Mean Dynamic Range  
V. Patrascu

Information theory and aggregation operators (organizers: A.Sgarro and S.Termini)

10- 11.15 Chair: A.Sgarro Room: SALA DESSAU

New results in aggregation based on ideas of Prof. Benvenuti Dedicated to Prof. Pietro Benvenuti  
R. Mesiar

From Information to Theory  
G. O. Longo

Information Theory and Fuzzy Integrals: along the way paved by Pietro Benvenuti  
D. Vivona

Soft Approaches to Information Access and Retrieval on the Web (organizers: G. Pasi and E. Herrera-Viedma)

10- 11.15 Chair: G. Pasi Room: AULA MAGNA

A Probabilistic Graphical Model for Web Retrieval  
L. M. De Campos, A.A. Fernández-Contreras, J. M. Fernández-Luna, J. F. Huete

Evaluating Web Document Quality with Linguistic Variables: Combining Informative and Page Design Quality  
E. García, M- Á Sicilia, T. Calvo

Integrating Agent Technology and Proximity Fuzzy Clustering for Assisted Web Navigation  
V. Loia, W. Pedrycz, S. Senatore, M. I. Sessa

Coffee Break

Applications

11.45 -13 Chair: L. Foulloy Room: AULA E

Contribution of fuzzy logic to the design of a parallel parking assistance system : placement phase details  
G. Gueydan, Z. Zalila

Fuzzy system for an Emergency Branking Aid (AFU)  
Z. Zalila, J. Benizri, G. Gueydan, C. Lorel, P. Romieu

Moisture control for concrete manufacturing  
P-Y. Glorennec, C. Hérault

Logic

11.45 -13 Chair: S. Tulipani Room: AULA 7

Termination results for sorted multi-adjoint logic programs  
C. V. Damásio, J. Medina, M. Ojeda-Aciego

On the role of strongly connected components in argumentation  
*P. Baroni, M. Giacomin*

Horn Formulae, Uncertainty and Probabilistic Satisfiability  
*D. Pretolani*

Image Processing

11.45 -12.30 *Chair: I. Bloch* *Room: AULA 8*

Blind Image Restoration from Multiple Views by IMAP Estimation  
*M. Discepoli, I. Gerace, R. Pandolfi*

Unsupervised Construction of Fuzzy Measures for Multi-dimensional Image Segmentation  
*A. Soria-Frisch, B. Nickolay*

Soft Approaches to Information Access and Retrieval on the Web (organizers: G. Pasi and E. Herrera-Viedma)

11.45 -13 *Chair: G. Pasi* *Room: AULA MAGNA*

Computing Range Queries on Obfuscated Data  
*E. Damiani, S. De Capitani di Vimercati, S. Paraboschi, P. Samarati*

Soft Approaches to Distributed Information Retrieval  
*G. Bordogna, G. Pasi, R. R. Yager*

Insider Disclosure in Inference Control of Tabular Databases  
*A. Oganian, J. Domingo-Ferrer, V. Torra*

Panel Session "Designing, Deploying, Transitioning, and Maintaining Knowledge-based Systems: the Lifecycle Challenge." (organizer: P. Bonissone)

11.45 -13 *Chair: P. Bonissone* *Room: SALA DESSAU*

Lunch

Applications

14.30 -16.15 *Chair: A. Formisano* *Room: AULA E*

Prediction of the results of football games based on fuzzy model with genetic and neuro tuning  
*A. Rotshtein, M. Posner, H. Rakytyanska*

Fuzzy Logic Tools for Lexical Acquisition  
*C. St-Jacques, C. Barrière, H. Prade*

A Series Reconstruction Approach to Demand Forecasting Using Genetic Algorithms  
*A. J. Grichnik, S. L. Grimes*

Correcting and Refining Users Queries: the Contribution of Morphological Knowledge and Association Rules  
*L. F. Soualmia, S. Darmoni*

Clustering

14.30 -17 *Chair: R. Coppi* *Room: AULA 8*

MELIDIS: Pattern recognition by intrinsic/discriminant dual modeling based on a hierarchical organization of fuzzy inference systems  
*N. Ragot, E. Anquetil*

Fuzzy C-Medoids Clustering Models for Time-Varying Data  
*R. Coppi, P. D'Urso, P. Giordani*

Incremental Rule Learning Using Incremental Clustering  
*A. Bouchachia*

A Combined Feature Extraction Method for an Electronic Nose  
*I. Hristozov, B. Iliev, S. Eskiizmirliker*

Some heuristic and deterministic global optimization algorithms to solve the problem of Multidimensional Scaling  
*T. Condamines, A. Mahfoudi, F. Messine*

Sparse Representation of Data and Support Vector Machines  
*P. Georgiev, F. Theis, A. Ralescu*

Control

14.30 -16.15 *Chair: P. Eklund* *Room: AULA MAGNA*

The Family of Fuzzy Self Adaptive Interpolative Controllers  
*M. M. Balas, V. E. Balas*

River Flow Modelling Based on Fuzzy Labels  
*N.J. Randon, J. Lawry, D. Han*

A Ball Management Policy Based on Stochastic Trajectory Estimation  
*A. Shmilovici, B. Shahar, L. Kadosh, L. Barnes*

Hand posture recognition with the fuzzy glove  
*T. Allevard, E. Benoit, L. Foulloy*

Fuzzy knowledge representation

14.30 -16.15 *Chair: A. Ventre* *Room: SALA DESSAU*

Fuzzy consumers: revealed preference and congruence axioms  
*I. Georgescu*

Midpoints as average representations of pairs of descriptions by means of fuzzy subsets  
*J. Casasnovas, F. Rosselló*

Fuzzy Three-valued and Four-valued Representation of Imprecise Properties  
*M. Delgado, D. Sánchez, M.A. Vila*

On Computing the Centroid of a *Symmetrical* Interval Type-2 Fuzzy Set  
*J. M. Mendel*

*Hybrid Methods*

14.30 -16.40

*Chair: S. Moral*

*Room: AULA 7*

A Hybrid Learning Process for the Knowledge Base of a Fuzzy Rule-Based System  
*J. Casillas , O. Cerdón, F. Herrera, P. Villar*

Selection of variables for systems analysis - application of a fuzzy test for independence  
*O. Hryniewicz*

Functional Equivalence between General Regression Neural Networks and TSK Fuzzy Inference Systems  
*J. L. Aznarte, J. M. Benítez, J. L. Castro*

Tracking of cyclic data by a markovian planification of classifiers  
*P. Loonis, H. Locteau*

Study of the Generalization Capability of the Sugeno-Yasukawa Class of Fuzzy Inference Systems  
*W. W. Melek, A. Sadeghian, A. A. Goldenberg*

*Farewell Party*