

## Monday - February, 1 2010

- 9.00 – 9.15 Conference opening  
9.20 – 10.10 KHURSHID Ahmad: The end of rationality?  
10.10 – 10.40 Coffee break

### *Sessions*

#### *Session A: Fuzzy modeling and applications (org. I. Perfilieva, M. Štěpnička)*

- 10.40 – 11.05 PERFILIEVA Irina, HOĐÁKOVÁ Petra, WRUBLOVÁ Michaela: On the interpolation of a sparse fuzzy data  
11.05 – 11.30 PERFILIEVA Irina, PAVLISKA Viktor: First degree F-transform versus Takagi-Sugeno models  
11.30 – 11.55 DAŇKOVÁ Martina: Graded fuzzy rules based on inverse F-transforms

#### *Session B:*

- 10.40 – 11.05 ASMUSS Svetlana: On approximation under L-fuzzy information  
11.05 – 11.30 LEBEDINSKA Julija: Fuzzy inverse matrix and its applications  
11.30 – 11.55 ULJANE Ingrida: On the concept of bornology in the context of many-valued sets

#### *Session C:*

- 10.40 – 11.05 JANIŠ Vladimír: Cuts of IF-sets  
11.05 – 11.30 BUSTINCE Humberto, FERNANDEZ Javier, BEDREGAL Benjamin: The contractive property for interval-valued fuzzy mappings  
11.30 – 11.55 DESCHRIJVER Glad, KRÁL' Pavol: On the properties of cardinality based similarities of interval-valued fuzzy sets

- 15.50 – 16.10 Coffee break

### *Sessions*

#### *Session A: Aggregation functions (org. A. Kolesárová)*

- 16.10 – 16.35 FODOR János, RUDAS Imre: On migrative triangular norms  
16.35 – 17.00 KOLESÁROVÁ Anna, MORDELOVÁ Juliana, STUPŇANOVÁ Andrea: Aggregation functions as extensions of fuzzy measures  
17.00 – 17.25 ŠABO Michal: Self-reversibility and some other properties of binary operations  
17.25 – 17.50 BELIAKOV Gleb, SIMON James, MORDELOVÁ Juliana, RÜCKSCHLOSSOVÁ Tatiana, YAGER Ronald R.: Generalized Bonferroni mean operators in multi-criteria aggregation

#### *Session B: Workshop on quantum logics (org. O. Nánásiová)*

- 16.10 – 16.35 PULMANNOVÁ Silvia: Observables on sigma-complete lattice effect algebras  
16.35 – 17.00 CHOVANEC Ferdinand, JUREČKOVÁ Mária: Fractal difference posets  
17.00 – 17.25 VINCEKOVÁ Elena: Congruences and ideals in effect and pseudo-effect algebras considered as total structures  
17.25 – 17.50 AL-ADILEE Ahmed, NÁNÁSIOVÁ Ol'ga: Relationships between an s-map and QL-copula

*Session C:*

16.10 – 16.35 ALIMORADI M.R., KORDI A., JABARI KHANBEHBIN T., AHMADI A.:

Soft rings

16.35 – 17.00 KORDI Ali: Soft A-ideals of soft BCI-algebras

17.00 – 17.25 KORDI Ali, JABARI KHANBEHBIN Tahereh, AHMADI Ali:

Generalizations of  $(\in, \in \vee q_k)$  - fuzzy ideals in BCK/BCI-algebras

17.25 – 17.50 KORDI Ali, JABARI KHANBEHBIN Tahereh, MOUSSAVI Ahmad,

AHMADI Ali: Soft QA-ideals of soft BCI-algebras

## Tuesday - February, 2 2010

8.30 – 9.20 NOGUERA Carles: From fuzzy sets to mathematical fuzzy logic

9.20 – 10.10 NOVÁK Vilém: On higher-order fuzzy logics

10.10 – 10.40 Coffee break

### *Sessions*

*Session A: Fuzzy modeling and applications (org. I. Perfilieva, M. Štěpnička)*

10.40 – 11.05 STĚPNIČKA Martin, DVOŘÁK Antonín, PAVLISKA Viktor, VAVŘIČKOVÁ Lenka: Fuzzy approach to time series analysis part I - Recent results

11.05 – 11.30 STĚPNIČKA Martin, DVOŘÁK Antonín, PAVLISKA Viktor, VAVŘIČKOVÁ Lenka: Fuzzy approach to time series analysis part II – Problems of linguistic descriptions

11.30 – 11.55 HOLČAPEK Michal: A noise reduction using a smoothing filter based on the F-transform

*Session B: Stochastic dependence and copulas (org. F. Durante, P. Sarkoci)*

10.40 – 11.05 KLEMENT Erich Peter, KOLESÁROVÁ Anna, STUPŇANOVÁ Andrea: Chebyshev stability of discrete universal integrals based on copulas

11.05 – 11.30 JWAID Tarad, DE BAETS Bernard: Double-conic copulas

11.30 – 11.55 JWAID Tarad, DE BAETS Bernard, DE MEYER Hans: Semi-quadratic copulas

*Session C:*

10.40 – 11.05 ELKINS Aleksandrs: Algebraic operations with relations on a set and corresponding rough approximation operators

11.05 – 11.30 GRIGORENKO Olga: Categorical aspects of aggregation of fuzzy relations

11.30 – 11.55 KRÍDLO Ondrej, KRAJČI Stanislav, PISKOVÁ Lenka: L-bonds between two L-fuzzy formal contexts

16.15 – 16.35 Coffee break

*Session A: Fuzzy modeling and applications (org. I. Perfilieva, M. Štěpnička)*

16.35 – 17.00 HUŇKA František, PAVLISKA Viktor: Error optimization of fuzzy transform using evolution algorithms

17.00 – 17.25 CÁNOVAS José S., KUPKA Jiří: On the topological entropy of fuzzified discrete dynamical systems

17.25 – 17.50 TOMANOVÁ Iva, KUPKA Jiří: Some extensions of mining of linguistic associations

*Session B: Stochastic dependence and copulas (org. F. Durante, P. Sarkoci)*

16.35 – 17.00 BACIGÁL Tomáš: Stressig dependence function in Archimax copulas with basic generators

17.00 – 17.25 JÁGR Vladimír: Copulas invariant with respect to conditioning

17.25 – 17.50 JURÁŇOVÁ Monika: On some constructions of Archimedean copulas

*Session C:*

16.35 – 17.00 NAVARA Mirko: Algebraic view on tribes

17.00 – 17.25 URBAŇSKI Michal K., BZOWSKI Adam: Construction of membership function based on measurement data

17.25 – 17.50 DVOŘÁK Antonín, HOLČAPEK Michal: Relativizations of L-fuzzy quantifiers of type  $\langle 1 \rangle$  determined by fuzzy measures

## Wednesday - February, 3 2010

### *Sessions*

#### *Session A:*

8.30 – 8.55 BACZYNSKI Michal, LUKASIK Radoslaw: The mutual independence of the properties in the characterization of R-implications generated from left-continuous t-norms

8.55 – 9.20 BACZYNSKI Michal, LUKASIK Radoslaw: On the different laws of contraposition for fuzzy implications

9.20 – 9.45 BIBA Vladislav, HLINĚNÁ Dana, KALINA Martin, KRÁL' Pavol: Generated fuzzy implications and I-fuzzy equivalences

9.45 – 10.10 DRYGAŚ Pawel: Connection between n-uninorms and balanced operators

10.10 – 10.35 MALINOWSKI Marek T., MICHTA Mariusz: Stochastic fuzzy differential equations

#### *Session B:*

8.30 – 8.55 LEBEDINSKA Julija: T-extension: a method of construction of a generalized aggregation operator

8.55 – 9.20 ORLOVS Pavels: T-norm based aggregation of L-fuzzy real numbers

9.20 – 9.45 RUZHA Vechislav: A concept of a fuzzy valued integral over a fuzzy set with respect to a fuzzy valued T-measure

9.45 – 10.10 COUCEIRO Miguel: On two generalizations of associativity

10.10 – 10.35 TAKÁCS Márta: Structured risk management model with fuzzy background

#### *Session C:*

8.30 – 8.55 ŠEŠELJA Branimir, TEPAVČEVIČ Andreja: Lattice valued algebras and identities

8.55 – 9.20 BUDIMIROVIČ Branka, BUDIMIROVIČ Vjekoslav, TEPAVČEVIČ Andreja: Fuzzy completely regular semigroups and fuzzy  $\mathcal{E}$ -subgroups

9.20 – 9.45 LATIF Raja Mohammad: Characterizations of some weaker forms of fuzzy alpha-continuous and fuzzy alpha-open mappings

9.45 – 10.10 SOLOVJOVS Sergejs: Composite variety-based topological theories

10.10 – 10.35 ŠOSTAK Alexander: M-approximative systems: some recent results and examples related to fuzzy topology and rough sets

10.35 – 11.05 Coffee break

11.05 – 11.55 PAP Endre: 20 years of pseudo-analysis and its applications

13.00 – 18.00 SOCIAL EVENT (two options)

19.00 Concert of participants (organizer B. Riečan)

## Thursday - February, 4 2010

### *Sessions*

*Session A: Mathematical fuzzy logic (org. L. Běhounek, P. Cintula, C. Noguera)*

8.30 – 8.55 BĚHOUNEK Libor, BODENHOFER Ulrich, CINTULA Petr, SAMINGER-PLATZ Susanne, SARKOCI Peter: Graded properties of t-norms

8.55 – 9.20 BĚHOUNEK Libor, BODENHOFER Ulrich, CINTULA Petr, SAMINGER-PLATZ Susanne, SARKOCI Peter: Graded properties of dominance

9.20 – 9.45 PETRÍK Milan, SARKOCI Peter: Web geometrical view of triangular norms and subnorms

9.45 – 10.10 CHVALOVSKÝ Karel: Independence of axioms in non-classical logics and automated theorem proving

*Session B:*

8.30 – 8.55 GAROLA Claudio, SOZZO Sandro: Generalized observables and mixtures in the ESR model for QM

8.55 – 9.20 SOZZO Sandro, GAROLA Claudio: The modified BCHSH inequalities in the ESR model for QM

9.20 – 9.45 RIEČANOVÁ Zdenka: Lattice effect algebras and the existence of states

9.45 – 10.10 PASEKA Jan: Modularity, atomicity and states in Archimedean lattice effect algebras

*Session C:*

8.30 – 8.55 PETRIČKOVÁ Anna: Moments of Markov-switching models

8.55 – 9.20 LENČUCHOVÁ Jana: Testing linearity for Markov-switching models

9.20 – 9.45 BOHDALOVÁ Mária, GREGUŠ Michal: Fuzzy fractals and finance time series

9.45 – 10.10 BOHDALOVÁ Mária, KALINA Martin, NÁNÁSIOVÁ Ol'ga: Comparison of quantum and classical models of time series

10.10 – 10.40 Coffee break

*Session A:*

10.40 – 11.05 FRIČ Roman, PAPČO Martin: A generalization of fuzzy sets and its application to quantum probability I

11.05 – 11.30 FRIČ Roman, PAPČO Martin: A generalization of fuzzy sets and its application to quantum probability II

11.30 – 11.55 JENČA Gejza: Coexistence in interval effect algebras

*Session B:*

10.40 – 11.05 BOCCUTO Antonio: Limit theorems in (I)-groups with respect to (D)-convergence

11.05 – 11.30 LI Jun, MESIAR Radko: Regularity of non-additive measures on complete and separable metric space

11.30 – 11.55 ZHANG Qiang, SUN Hongxia: Monotone set-valued function defined by set-valued Choquet integral

*Session C:*

10.40 – 11.05 HORVÁTH K. Eszter, ŠEŠELJA Branimir, TEPAVČEVIČ Andreja:

Rectangular fuzzy relations and islands

11.05 – 11.30 JANIŠ Vladimír, RENČOVÁ Magdaléna, ŠEŠELJA Branimir, TEPAVČEVIČ Andreja: Constructing a lattice and a lattice valued relation by closure systems

11.30 – 11.55 TAKAČI Aleksandar, ŠKRBIČ Srdjan, RACKOVIČ Miloš: Fuzzy relations induced from crisp orderings and equivalences

16.15 – 16.35 Coffee break

*Session A:*

15.25 – 15.50 CIUNGU Lavinia C., DVUREČENSKIJ Anatolij, HYČKO Marek: State BL-algebras

15.50 – 16.15 DVUREČENSKIJ Anatolij: Characterization of subdirectly irreducible state-morphism BL-algebras

16.15 – 16.35 Coffee break

16.35 – 17.00 DANESHVAR Babak R., SERPIL Erol: The DEA - FANP department ranking model applied in Iran Amirkabir University

17.00 – 17.25 ŠPIRKOVÁ Jana, KRÁL Pavol: Aggregation functions and utility functions in general insurance

17.25 – 17.50 KALMBACH Gudrun H.E.: Evolution of Physics

*Session B:*

15.50 – 16.15 SEMPI Carlo: Characterization of quasi-copulae: the proof by Cuculescu & Theodorescu

16.15 – 16.35 Coffee break

16.35 – 17.00 KLIMO Martin, BOROŇ Juraj: Temporary properties of RS fuzzy flip-flops

17.00 – 17.25 LOVASSY Rita, KÓCZY T. László, GÁL László: Fuzzy flip-flops as basic components in fuzzy neural networks

17.25 – 17.50 LUKASIK Szymon, KULCZYCKI Piotr: Data dimensionality and sample size reduction for fuzzy modeling and control

*Session C:*

15.25 – 15.50 IMAN Maryam, SABERI Morteza, AZADEH Ali, HOSEINI Ashraf, ASHJARI Behzad: Fuzzy inference to risk assessment on railway signal systems

15.50 – 16.15 SABERI Morteza, AZADEH Ali, NADIMI Vahid, IMAN Mino: An adaptive-network-based fuzzy inference system for long-term electricity consumption forecasting (2008-2015): A case study of Netherland, Luxembourg, Ireland, Italy

16.15 – 16.35 Coffee break

16.35 – 17.00 BUKOR József, MIŠÍK Ladislav, TÓTH János, T.: On mapping preserving universal fuzzy measurability

17.00 – 17.25 KALINA Martin, MANZI Maddalena: Characterization of TS-measures

17.25 – 17.50 RENČOVÁ Magdaléna: An overview of probability theory on fuzzy events and an extensions

19.00 – Banquet

**Friday - February, 5 2010**

9.00 – 9.50 DURANTE Fabrizio: Copulas and extreme events

9.50 – 10.40 ZHANG Qiang, MESIAR Radko, LI Jun, STRUK Peter: Generalized integral

10.40 – 11.05 Coffee break

11.05 – 11.55 DE BAETS Bernard: A tour of cycle-transitivity

11.55 – 12.00 Closing ceremony