

## Monday, January 27, 2014

8.45            Opening of the conference

### **Invited lecture, chair Klement**

9.00 – 9.50     Viertl R.: Fuzzy models and stochastics

9.50 – 10.20    Coffee break

### **10.20 – 12.00    Contributed lectures I**

#### **Session A, chair Jayaram**

10.20 – 10.40   Bustince H., Fernandez J., Kolesárová A., Mesiar R.: Fusion functions and their directional monotonicity

10.40 – 11.00   Jočić D., Štajner-Papuga I.: On restricted distributivity of aggregation operators and utility functions

11.00 – 11.20   Drygaś P., Rak E.: Distributivity equation in the class of semi t-operators

11.20 – 11.40   Vemuri N.R., Anamandra S.H., Seshadri S.: Set difference and symmetric difference of fuzzy sets

11.40 – 12.00   Špirková J.: Annuity valuation by copulas

#### **Session B, chair Pulmannová**

10.20 – 10.40   Dvurečenskij A.: On kite pseudo BL-algebras

10.40 – 11.00   Hyčko M.: Generalized weak pre-pseudo effect algebras

11.00 – 11.20   Jenča G.: D-posets and the Kalmbach monad

11.20 – 11.40   Riečanová Z.: Operator effect algebras

11.40 – 12.00   Jenčová A., Pulmannová S.: Effect algebras with a state operator

#### **Session C, chair Gottwald**

10.20 – 10.40   Boroński J.P., Kupka J.: Inverse limits in fuzzy dynamical systems

10.40 – 11.00   Holčapek M., Perfilieva I., Novák V.: Generalized uniform fuzzy partition: Analysis of necessary and sufficient condition

11.00 – 11.20   Štěpnička M., Holčapek M.: Fuzzy relational compositions based on generalized quantifiers

11.20 – 11.40   Bentkowska U., Król A.: Aggregation procedure and fuzzy relation properties based on binary operations

11.40 – 12.00   Cánovas J., Kupka J.: On fuzzy entropy and topological entropy of fuzzy extensions of dynamical systems

12.00 – 13.00   Lunch

16.00 – 16.20   Coffee break

### **16.20 – 17.20    Contributed lectures II**

#### **Session A, chair Vetterlein**

16.20 – 16.40   Gottwald S.: Local finiteness in t-norm-bimonoids

16.40 – 17.00   Jenei S.: Five new constructions of involutive FLe-algebras

17.00 – 17.20   Petřík M.: Web-geometric view on positively cancellative triangular subnorms

#### **Session B, chair Štěpnička**

16.20 – 16.40   Hoďáková P., Perfilieva I.: Fuzzy transform of a higher degree and partial derivatives

16.40 – 17.00   Asmuss S., Kodorane I.: On F-transforms with fuzzy partitions based on higher degree splines

17.00 – 17.20   Hurtik P., Madrid N.: Fuzzy image applied into Hough transform to detect lines

#### **Session C, chair Krajčí**

16.20 – 16.40   Budimirović B., Budimirović V., Šešelja B., Tepavčević A.: Fuzzy subgroups of a groupoid

16.40 – 17.00   Janiš V., Kobza V.: Hesitant metrics

17.30 – 18.30   Dinner

19.30 – 21.00   Round table: Quantum structures

## **Tuesday, January 28, 2014**

### **Invited lecture, chair Štajner-Papuga**

8.50 – 9.40 Mesiarová-Zemánková, A.: Advances in multi-polar aggregation

9.40 – 10.10 Coffee break

### **10.10 – 11.50 Contributed lectures I**

#### **Session A, chair Kalina**

10.10 – 10.30 Bacigál T., Mesiar R., Najjari V.: Some new construction methods of additive generators of copulas

10.30 – 10.50 De Santis E., Fantozzi F., Spizzichino F.: Copulas, stochastic precedence, and stochastic ordering for capacities

10.50 – 11.10 Mesiar R., Kalická J., Šipeky L.: Diagonal copulas and quasi-copulas

11.10 – 11.30 Mesiar R., Komorníková M.: Construction methods for bivariate copulas

#### **Session B, chair Asmuss**

10.10 – 10.30 Čimoka D., Šostak A.: On L-fuzzy syntopogenous structures

10.30 – 10.50 Elkins A., Šostak A.: On the category of L-rough sets with variable range

10.50 – 11.10 Krupka M.: A topology on residuated lattices

11.10 – 11.30 Solovjovs S., Stehlík M.: On the category of lattice-valued bornological spaces

11.30 – 11.50 Šostak A., Uljane I.: L-valued fuzzy bornological structures

#### **Session C, chair Viertl**

10.10 – 10.30 Grěč M., Horáček M., Samec P., Vojvodík D., Burda M.: Creating RGB maps of soil damage using fuzzy clustering

10.30 – 10.50 Hudec M.: Linguistic summaries on relational databases

10.50 – 11.10 Levashenko V.: Fuzzy Decision Trees

11.10 – 11.30 Mandal S., Jayaram B.: Suitability of FRIs based on Generalised Operators

12.00 – 13.00 Lunch

16.00 – 16.20 Coffee break

### **16.20 – 17.20 Contributed lectures II**

#### **Session A, chair Jenei**

16.20 – 16.40 Vetterlein T.: On the axiomatisation of logics for approximate reasoning

16.40 – 17.00 El-Zekey M.: Balanced implications

17.00 – 17.20 Mattioli G.: Why fuzzy?

#### **Session B chair Holčapek**

16.20 – 16.40 Dombi J., Csiszár O.: The general nilpotent operator system

16.40 – 17.00 Dyba M., Novák V.: First-order EQ-logic with equality

17.00 – 17.20 Murinová P., Novák V.: Semantic interpretation of intermediate quantifiers and their syllogisms

#### **Session C, chair Riečan**

16.20 – 16.40 Michalíková A.: On extensions of the weight-center operator defined over intuitionistic fuzzy sets

16.40 – 17.00 Považan J.: Representation theorem of general states on IF-sets

17.00 – 17.20 Skřivánek V.: States on IF events

17.30 – 18.30 Dinner

19.30 – 21.00 Open problems session

## Wednesday, January 29, 2014

### **Invited lecture , chair Grabisch**

8.50 – 9.40 Greco S., Mesiar R., Rindone F.: The superadditive integral

9.40 – 10.10 Coffee break

### **10.10 – 11.50 Contributed lectures**

#### **Session A, chair Baczynski**

10.10 – 10.30 Orlovs P., Asmuss S.: Generalized factoraggregation based on fuzzy equivalence relation

10.30 – 10.50 Paternain D., Bustince H., Fernandez J., Mesiar R., Kolesárová A.: A class of internal aggregation functions for image reduction

10.50 – 11.10 Pečala B.: Properties of interval-valued fuzzy relations and aggregation process

11.10 – 11.30 Rak E., Drygaś P.: Distributivity equation in the class of 2-uninorms

11.30 – 11.50 Karaçal F., Mesiar R., Çaylı Gül D.: Notes on uninorms on bounded lattices

#### **Session B, chair Riečanová**

10.10 – 10.30 Paseka J.: Representation of functions between semisimple MV-algebras

10.30 – 10.50 Pulmannová S.: Representations of MV-algebras by Hilbert-space effects

10.50 – 11.10 Vinceková E., Pulmannová S.: MV-pairs and state operators

11.10 – 11.30 Navara M.: The role of symmetric difference in quantum structures

11.30 – 11.50 Bohdalová M., Kalina M., Nánásiová O.: Stochastic causality and orthomodular lattices

#### **Session C, chair Šostak**

10.10 – 10.30 Antoni L., Krajči S., Křídlo O.: Fuzzy concept-forming operators on heterogeneous structures

10.30 – 10.50 Monim H., Šešelja B., Tepavčević A.: Structural analysis of semilattices and lattices by fuzzy sets

10.50 – 11.10 Kesicioğlu Y., Akbaş M.: On suborbital graphs for a special congruence subgroup

11.10 – 11.30 Frič R., Papčo M.: Cogenerators in generalized probability

11.30 – 11.50 Mišík L., Tóth J.T.: On a class of cardinal densities

12.00 – 13.00 Lunch

13.30 – 17.30 Social event

17.30 – 18.30 Dinner

19.00 – Concert of FSTA participants and their guests

## Thursday, January 30, 2014

### **Invited lecture, chair Dvurečenskiĵ**

8.50 – 9.40 Jayaram B.: Data analysis: a 3-D perspective

9.40 – 10.10 Coffee break

### **10.10 – 11.50 Contributed lectures I**

#### **Session A, chair Saminger-Platz**

10.10 – 10.30 Helbin P., Baczyński M.: On the exchange principle for fuzzy implications

10.30 – 10.50 Niemyska W., Baczyński M., Grzegorzewski P.: Laws of contraposition and law of importation for probabilistic implications and probabilistic S-implications

10.50 – 11.10 Vemuri N.R., Jayaram B.: Conjugacy relation via group action on the set of fuzzy implications

11.10 – 11.30 Kesicioğlu M.N., Mesiar R.: The order generated by implications

11.30 – 11.50 Hliněná D., Kalina M., Král' P.: Preorder induced by uninorms

#### **Session B, chair Janiš**

10.10 – 10.30 Mesiar R., Stupňanová A., Klement E.P., Spizzichino F.: Integrals based on copulas

10.30 – 10.50 Smrek P.: Level dependent capacities-based Sugeno integrals

10.50 – 11.10 Halčinová L.: On probabilistic-valued decomposable measures and integrals

11.10 – 11.30 Molnářová J.: Convergence theorems for (semi)copula-based universal integrals

11.30 – 11.50 Riečan B.: On invariant measures on fuzzy sets

#### **Session C, chair Bustince**

10.10 – 10.30 Takači A., Marić M., Drakulić D.: The use of fuzzy logic in location problems

10.30 – 10.50 Vajgl M.: Approaches used to measure quality of multifocus image fusion

10.50 – 11.10 Zaitseva E.: Multiple-Valued Logic in reliability analysis of Multi-State System

11.10 – 11.30 Burda M.: Using bit operations for fast evaluation of t-norms

11.30 – 11.50 Naeem M., Abdullah S.: Construction of cubic soft sets: A new mathematical modelling of uncertainty

12.00 – 13.00 Lunch

16.30 – 16.40 Coffee break

### **16.40 – 17.20 Contributed lectures II**

#### **Session B, chair Mesiarová-Zemánková**

16.40 – 17.00 Faigle U., Grabisch M.: Linear transforms, bases and quadratic optimality criteria for games

17.00 – 17.20 Bartková R.: Extreme value theorems on a non-additive probability space

18.30 – 24.00 Banquet

## **Friday, January 31, 2014**

### **Invited lecture I, chair Navara**

9.00 – 9.50 Bustince H.: Penalty-functions and interval valued fuzzy sets in multi-expert decision making problems

9.50 – 10.10 Coffee break

### **Invited lectures II, chair Mesiar**

10.10 – 11.00 Rusinowska A., Foerster M., Grabisch M.: Aggregation functions in social networks: Application to influence and contagion

11.00 – 11.50 Saminger-Platz S.: Triangle functions - constructions and functional (in)equalities

11.50 – 12.00 Closing of the conference

12.00 – 13.00 Lunch

13.00 – Departure of FSTA 2014 participants