

## Monday, January 29, 2018

8.55            Opening of the conference

### **Invited lecture**

9.10 – 10.10    Holčapek M., Dvořák A.: *Fuzzy quantifiers: from Zadeh's fuzzy quantification to theory of fuzzy quantifiers*

10.10 – 10.35    Coffee break

### **10.35 – 11.55    Contributed lectures I**

#### **Session A**

10.35 – 10.55    Couceiro M., Grabisch M.: *On integer-valued means and the symmetric maximum*

10.55 – 11.15    Stupňanová A.: *Symmetrization of aggregation functions*

11.15 – 11.35    Marco-Detchart C., Fernandez J., Barranechea E., Mesiar R., Bustince H.: *Ordered directionally monotone functions and the problem of edge detection*

11.35 – 11.55    Rak E., Bentkowska U.: *Solutions of the distributivity and modularity equations for some classes of aggregation functions*

#### **Session B**

10.35 – 10.55    Štepnička M., Cao N.: *Fuzzy relational compositions as appropriate tools for encoding expert knowledge (and using it for classification)*

10.55 – 11.15    Baczyński M., Mis K., Niemyska W.: *Characterizations of some reasoning schemas through fuzzy connectives*

11.15 – 11.35    Guada C., Gomez D., Rodriguez J.T., Yañez J., Montero J.: *Fuzzy image segmentation concept and its visualization*

11.35 – 11.55    Pukitis M.: *Supervised classification of remotely sensed images: comparison of crisp and fuzzy techniques*

12.00            Lunch

### **15.55 – 16.35    Contributed lectures II**

#### **Session A**

15.55 – 16.15    Halaš R., Mesiar R., Pócs J.: *Composition based generation of aggregation functions on real interval*

16.15 – 16.35    Halaš R., Kurač Z., Pócs J.: *On minimality of generating sets of aggregation clones*

#### **Session B**

15.55 – 16.15    Hudec M.: *Quantified fuzzy queries merged by asymmetric disjunction*

16.15 – 16.35    Murinová P.: *Properties of graded hexagon with intermediate quantifiers*

16.35 – 16.55    Coffee break

### **16.55 – 17.55    Contributed lectures III**

#### **Session A**

16.55 – 17.15    Vagaská A., Stupňanová A.: *A note on moderate deviation function*

17.15 – 17.35    Sesma-Sara M., Lafuente J., Fernandez J., Mesiar R., Bustince H.: *From weakly monotone to strengthened ordered directionally monotone functions*

17.35 – 17.55    Mesiar R., Kolesárová A.: *On k-order pseudo-additive aggregation functions*

#### **Session B**

16.55 – 17.15    Borkotokey S., Hazarika P., Mesiar R.: *Fuzzy cooperative games with multiple attributes*

17.15 – 17.35    Todorov M., Štrboja M., Pap E., Mihailović B.: *On the Jensen type inequality for the bipolar pseudo-integrals*

17.35 – 17.55    Michalíková A., Riečan B.: *On states on fuzzy sets*

18.00            Dinner

## Tuesday, January 30, 2018

### Invited lectures

- 8.30 – 9.30 Pasi G.: *A model driven approach to predictive tasks based on aggregation operators*  
9.30 – 10.30 Dimuro G., Bustince H.: *Pre-aggregation functions and their role in fuzzy-rule based classification systems*

10.30 – 10.55 Coffee break

### 10.55 – 11.55 Contributed lectures I

#### Session A

- 10.55 – 11.15 Grabisch M., Rusinowska A., Venel X.: *Modelling contagion by aggregation functions*  
11.15 – 11.35 Bentkowska U., Pełkala B.: *Local properties of fuzzy relations in aggregation process*  
11.35 – 11.55 Špirková J., Hudec S.: *Smoothing of mortality rates using mixture functions*

#### Session B

- 10.55 – 11.15 Hovana A., Hutník O.: *On integral inequalities for the smallest semicopula-based universal integral*  
11.15 – 11.35 Hutník O., Pócs J.: *On \*-associated comonotone functions*  
11.35 – 11.55 Borzová J., Halčinová L.: *Non-additive integrals and sizes (on discrete spaces)*

12.00 Lunch

### 15.15 – 16.15 TUTORIAL

Cibira G.: *Optimization of fuzzy-logic control system: Data transfer case study*

16.15 – 16.35 Coffee break

### 16.35 – 17.55 Contributed lectures II

#### Session A

- 16.35 – 16.55 Helbin P., Baczyński M.: *Fuzzy implications generated by using the Sklar's Theorem*  
16.55 – 17.15 Baczyński M., Mis K., Niemyska W.: *On fuzzy implications satisfying generalized hypothetical syllogism*  
17.15 – 17.35 Król A.: *Overview of ordinal sums of fuzzy implications*  
17.35 – 17.55 Navara M.: *Generators of triangular norms and fuzzy implications*

#### Session B

- 16.35 – 16.55 Šostak A., Han S.-E.: *On many-valued measures of roughness for approximation of L-fuzzy sets*  
16.55 – 17.15 Král' P., Janiš V., Montes S.: *Uncertainty-aware similarity measures for interval-valued fuzzy sets*  
17.15 – 17.35 Paternain D., Ochoa G., Lizasoain I., Bustince H., Mesiar R.: *Interval aggregation using different admissible orders*  
17.35 – 17.55 Takashi M.: *Complication of center of gravity method for periodic membership function*

18.00 Dinner

19.30 Open problems session – discussion

## Wednesday, January 31, 2018

### **8.30 – 10.10 Contributed lectures I**

#### **Session A**

- 8.30 – 8.50 Paseka J., Zhang X.: *On injective constructions of  $S$ -semigroups*  
8.50 – 9.10 Jenča G.: *Tensor product of effect algebras as a Kan extension*  
9.10 – 9.30 Hyčko M.: *Hyper pseudo effect algebras*  
9.30 – 9.50 Foulis D. J., Jenčová A., Pulmannová S.: *Vector lattices in mathematical models of quantum mechanics*  
9.50 – 10.10 Jenei S.: *Strong standard completeness of IUL plus  $t \Leftrightarrow f$*

#### **Session B**

- 8.30 – 8.50 Drygaš P., Su Y.: *Properties of some class of uninorms*  
8.50 – 9.10 Hliněná D., Kalina M., Král' P.: *On orders and pre-orders generated from uninorms defined on  $[0; 1]^2$*   
9.10 – 9.30 Aşici E.: *A survey on an order induced by nullnorms on bounded lattices*  
9.30 – 9.50 Jočić D., Štajner-Papuga I., Spahić N.: *A note on distributivity for  $S$ -uninorms*  
9.50 – 10.10 Çaylı G. D.: *Characterization of triangular norms and triangular conorms on lattices*

10.10 – 10.35 Coffee break

### **10.35 – 11.55 Contributed lectures II**

#### **Session A**

- 10.35 – 10.55 Saminger-Platz S.: *On the defects of quasi-copulas*  
10.55 – 11.15 Sempi C.: *A martingale for quasi-copulas*  
11.15 – 11.35 Komorník J., Komorníková M., Kalická J.: *Generalization of the FGM family of copulas*  
11.35 – 11.55 Bacigál T.: *Meditation on statistical properties of the Archimedean copulas stochastic interpretation*

#### **Session B**

- 10.35 – 10.55 Frič R., Papčo M.: *Fuzzy stochastic channel and asymmetrical stochastic independence I*  
10.55 – 11.15 Frič R., Papčo M.: *Fuzzy stochastic channel and asymmetrical stochastic independence II*  
11.15 – 11.35 Cánovas J., Kupka J.: *On topological entropy of fuzzy dynamical systems*  
11.35 – 11.55 Takáč Z., Minárová M., De Miguel L., Fernandez J., Bustince H.: *Interval-valued entropies and  $p$ -entropies*

12.00 Lunch

13.30 Social event

18.00 Dinner

19.30 Concert of FSTA 2018 participants

## Thursday, February 1, 2018

### Invited lecture

8.30 – 9.30 Omladič M.: *The path to copulas is paved (also) with shock models*

9.30 – 9.55 Coffee break

### 9.55 – 11.55 Invited session on dependence concepts

#### Session A

9.55 – 10.15 Jaworski P.: *Extreme value copulas and Genest problem*

10.15 – 10.35 Košir T.: *Inverse maxmin copulas and modelling quadrant subindependence*

10.35 – 10.55 Kokol Bukovšek D.: *Asymmetry of copulas arising from shock models*

10.55 – 11.15 Mojšker B.: *Multivariate copulas arising from shock models*

11.15 – 11.35 Škulj D., Omladič M.: *Constructing copulas from shock models with imprecise distributions*

11.35 – 11.55 Sloot H.: *Exogenous shock models – characterization and hierarchical construction*

### 9.55 – 11.55 Contributed lectures I

#### Session B

9.55 – 10.15 Takaci A., Marič M., Radojičić N., Došenović T.: *Application of fuzzy logic in modelling of the max-min diversity problem*

10.15 – 10.35 Takács M.: *Fuzzy clustering method for cognitive map construction*

10.35 – 10.55 Kupka J., Rusnok P.: *Fuzzy partitions in data mining*

10.55 – 11.15 Lama R., Asmuss S.: *On minimization problems with fuzzy relation inequality constraints*

11.15 – 11.35 Kokainis M., Asmuss S.: *F-transforms based on B-splines: Advantages and possible applications*

11.35 – 11.55 Nguyen L., Holčapek M.: *Bivariate fuzzy transform based on tensor product of two polynomial spaces*

12.00 Lunch

### 15.55 – 16.35 Invited session on dependence concepts

#### Session A

15.55 – 16.15 Bohdalová M., Greguš M.: *Bitcoin, gold and uncertainty*

16.15 – 16.35 Spizzichino F.: *Probabilistic meaning and inequalities for copula-based extensions of fuzzy measures*

### 15.55 – 16.35 Contributed lectures II

#### Session B

15.55 – 16.15 Antoni L., Krajči S., Krídlo O.: *Squared symmetric formal contexts and their properties*

16.15 – 16.35 Pócs J., Pócs J.: *Bonds between generalized one-sided contexts*

16.35 – 16.55 Coffee break

### 16.55 – 17.55 Contributed lectures III

#### Session A

16.55 – 17.15 de Amo Artero E., Fernández Sánchez J., Úbeda Flores M.: *Zero sets for (semi)copulas*

17.15 – 17.35 Popović V. B., Ristić M. M.: *On dependence properties of the new multivariate distribution family*

17.35 – 17.55 Dibala M., Vavříková L., Genest Ch.: *On the size of the class of exchangeable bivariate extreme-value copulas with a given level of dependence*

#### Session B

16.55 – 17.15 Horanská L., Takáč Z.: *Characterization of  $k$ -Choquet integrals*

17.15 – 17.35 Smrek P.: *On the decomposition approach to the Sugeno integral*

19.00 Banquet

## **Friday, February 2, 2018**

### **Invited lecture I**

9.15 – 10.15 Montes S.: *Divergence measures as a tool for comparing sets*

10.15 – 10.40 Coffee break

### **Invited lecture II**

10.40 – 11.40 Gagolewski M.: *Stochastic properties of and agent-based models for the Hirsch index and other discrete Sugeno integrals*

11.40 – 11.50 Closing of the conference

12.00 Lunch

13.00 Departure of FSTA 2018 participants