

PROGRAMME

8th International Conference on

SOFT METHODS IN PROBABILITY AND STATISTICS

<http://www.sbai.uniroma1.it/sm2016>

September 12 – 14, 2016
San Pietro in Vincoli, via Eudossiana 18, Rome

Organized by

Dipartimento di Scienze di Base e Applicate per l'Ingegneria

and

Dipartimento di Scienze Statistiche



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Monday, September 12, 2016

09:00-09:40 Registration

09:40-09:50 Opening ceremony (Room: Sala del Chiostro)

09:50-10:50 Plenary lecture (Room: Sala del Chiostro)

Chair: P. Giordani

Beyond Fuzzy, Possibilistic and Rough: An Investigation of Belief Functions in Clustering

T. Denoeux (University of Technology of Compiègne)

10:50-11:20 Coffee break

**11:20-13:00 Organized session: Imprecise probabilities I
(Room: Sala del Chiostro)**

Chair: E. Miranda

On extreme points of p -boxes and belief functions

I. Montes, S. Destercke

A sandwich Theorem for Natural Extensions

R. Pelessoni, P. Vici

Technical Gestures Recognition by Set-Valued Hidden Markov Models with Prior Knowledge

Y. Soullard, A. Antonucci, S. Destercke

Full conglomerability, continuity and marginal extension

E. Miranda, M. Zaffalon

**11:20-13:00 Organized session: Probability and statistics with fuzzy sets
(Room: 7)**

Chair: B. Sinova

Agglomerative Fuzzy Clustering

C. Borgelt, R. Kruse

The Likelihood Interpretation of Fuzzy Data

M. Cattaneo

Robust Fuzzy Clustering via Trimming and Constraints

F. Dotto, A. Farcomeni, L.A. García-Escudero, A. Mayo-Isacar

Tukey's biweight loss function for fuzzy set-valued M -estimators of location

B. Sinova, S. Van Aelst

13:00-14:30 Lunch

**14:30-16:10 Contributed session: Imprecise probabilities II
(Room: Sala del Chiostro)**

Chair: G. de Cooman

The Extension of Imprecise Probabilities based on Generalized Credal Sets
A. Bronevich, I. Rozenberg

Composition Operator for Credal Sets Reconsidered
J. Vejnarova

Testing of coarsening mechanisms: Coarsening at random versus subgroup independence
J. Plass, M. Cattaneo, G. Schollmeyer, T. Augustin

Maximum likelihood under incomplete information: toward a comparison of criteria
I. Couso, D. Dubois

14:30-16:10 Organized session: Soft methods in official statistics (Room: 7)
Chair: B. Liseo

Bayesian inference with linkage uncertainty: applications in official statistics
D. Briscolini, B. Liseo, A. Tancredi

The use of uncertainty to choose matching variables in statistical matching
M. D'Orazio, M. Di Zio, M. Scanu

Small area estimation in presence of linkage errors
L. Di Consiglio, T. Tuoto

Talk to your neighbour: a belief propagation approach to data fusion
E. Laurenza

16:10-16:40 Coffee break

16:40-18:00 Organized session: Statistical methods for non-precise data I (Room: Sala del Chiostro)
Chair: I. Couso

The sign test for the interval-valued data
P. Grzegorzewski, M. Spiewak

Distributions Related to Fuzzy P-Values
O. Hryniewicz

Two-sample similarity test for the expected value of random intervals
A.B. Ramos-Guajardo, A. Blanco-Fernández

16:40-18:00 Organized session: Conditional probabilities in different frameworks (Room: 7)
Chair: P. Rigo

Asymptotics of predictive distributions
P. Berti, L. Pratelli, P. Rigo

The Representation of Conglomerative functionals
G. Cassese

Envelopes of joint probabilities with given marginals under absolute continuity or equivalence constraints
D. Petturiti, B. Vantaggi

Tuesday, September 13, 2016

09:00-10:20 Organized session: Statistical methods for non-precise data II
(Room: Sala del Chiostro)
Chair: A.B. Ramos-Guajardo

An empirical analysis of the coherence between fuzzy rating scale- and Likert scale-based responses to questionnaires

M.A. Lubiano, A. Salas, S. De La Rosa de Saa, M. Montenegro, M.Á. Gil

On asymptotic properties of the multiple fuzzy least squares estimator
J.H. Yoon, S.H. Choi, P. Grzegorzewski

Independent k-sample equality distribution test based on the fuzzy representation
A. Blanco-Fernández, A.B. Ramos-Guajardo

09:00-10:20 Organized session: Fuzziness in finance (Room: Sala degli Affreschi)
Chair: A. Capotorti

Black-Litterman model with multiple experts' linguistic views
M. Bartkowiak, A. Rutkowska

Time series modeling based on fuzzy transform
M.L. Guerra, L. Sorini, L. Stefanini

A Generalized SMART Fuzzy Disjunction of volatility indicators applied to Option Pricing in a Binomial Model
A. Capotorti, G. Figà-Talamanca

10:20-10:50 Coffee break

10:50-11:50 Plenary lecture (Room: Sala del Chiostro)
Chair: B. Vantaggi

A non Bayesian Approach to Measurement Problems
M. Marinacci (Bocconi University)

11:50-13:10 Organized session: Data analysis with dependence models I
(Room: Sala del Chiostro)
Chair: R. Kruse

On the construction of radially symmetric trivariate copulas
J. De Jesús Arias García, H. De Meyer, B. De Baets

One-factor Lévy-frailty copulas with inhomogeneous trigger rates
J. Engel, M. Scherer, L. Spiegelberg

A test for truncation invariant dependence
M.L. Di Lascio, F. Durante, P. Jaworski

11:50-13:10 Contributed session: Decision making (Room: Sala degli Affreschi)
Chair: D. Dubois

Combining the Information of Multiple Ranker in Ranked Set Sampling with Fuzzy Set

Approach

B. Cetintav, S. Gurler, N. Demirel, G. Ulutagay

A Savage-like representation theorem for preferences on multi-acts

G. Coletti, D. Petturiti, B. Vantaggi

Lexicographic choice functions without archimedeanity

A. Van Camp, E. Miranda, G. de Cooman

13:10-14:40 Lunch and IJAR Best Paper Award

**14:40-16:45 Organized session: Conditionals and reasoning under uncertainty
(Room: Sala del Chiostro)**

Chairs: N. Pfeifer, G. Sanfilippo

Updating context in the equation: An experimental argument with eye tracking

J. Baratgin, B. Oçak, H. Bessaa, J.-L. Stilgenbauer

Centering and compound conditionals under coherence

A. Gilio, D.E. Over, N. Pfeifer, G. Sanfilippo

Probabilistic semantics and pragmatics for the language of uncertainty

S. Kaufmann

Square of opposition under coherence

N. Pfeifer, G. Sanfilippo

Back to "Reasoning"

M.E. Tabacchi, S. Termini

14:40-16:45 Contributed session: Applications (Room: Sala degli Affreschi)

Chair: O. Hryniewicz

Simulation of the Night Shift Solid Waste Collection System of Phuket Municipality

S. Banditvilai, M. Niraso

Dynamic Analysis of the Development of Scientific Communities in the Field of Soft Computing

E. Kutynina, A. Lepskiy

Predictability in probabilistic discrete event systems

F. Nouioua, P. Dague, L. Ye

Detecting Inconsistencies in Revision Problems

F. Schmidt, J. Gebhardt, R. Kruse

Treat a fuzzy dependence among causes and lives in insurance with some copulas based approaches

D. Wang, T. Wang

17:00-18:00 Walking in Rome

19:30-23:00 Conference dinner

Wednesday, September 14, 2016

**09:00-10:20 Contributed session: Soft computing and statistics
(Room: Sala del Chiostro)**
Chair: M.Á. Gil

Representing lightweight ontologies in a product-based possibility theory framework
S. Benferhat, K. Boutouhami, F. Khellaf, F. Nouioua

Fuzzy signals fed to Gaussian channels
L. Franzoi, A. Sgarro

Handling uncertainty in Structural Equation Modeling
R. Romano, F. Palumbo

**09:00-10:20 Organized session: Data analysis with dependence models II
(Room: Sala degli Affreschi)**
Chair: F. Durante

A multivariate analysis of tourists' spending behavior
M. Disegna, F. Durante, E. Foscolo

Approximate Bayesian Methods for Multivariate and Conditional Copulae
B. Liseo, C. Grazian

Modelling the dependence in multivariate longitudinal data by pair copula decomposition
M. Nai Ruscone, S.A. Osmetti

10:20-10:50 Coffee break

10:50-11:50 Plenary lecture (Room: Sala del Chiostro)
Chair: M.B. Ferraro

On some functional characterizations of (fuzzy) set-valued random elements
A. Colubi (University of Oviedo)

11:50-13:10 Contributed session: (Random) sets (Room: Sala del Chiostro)
Chair: P. Grzegorzewski

Mean value and variance of fuzzy numbers with non-continuous membership functions
L. Anzilli, G. Facchinetti

Measuring the dissimilarity between the distributions of two random fuzzy numbers
M.A. Lubiano, M.Á. Gil, B. Sinova, M.R. Casals, M.T. López

A nonparametric linearity test for a sort of multivariate regression model with fuzzy data
D. Wang

**11:50-13:10 Contributed session: Clustering and classification
(Room: Sala degli Affreschi)**
Chair: G. González-Rodríguez

A Perceptron Classifier and Corresponding Probabilities
B.-J. Falkowski

Consensus-based clustering in numerical decision-making

J.L. García-Lapresta, D. Pérez-Román

A Portfolio Diversification Strategy via Tail Dependence Clustering

H. Wang, R. Pappadà, F. Durante, E. Foscolo

13:10-14:40 Lunch

14:40-16:00 Organized session: Robust statistics (Room: Sala del Chiostro)

Chair: L.A. Garcia-Escudero

Finite mixture of linear regression models: an adaptive constrained approach to maximum likelihood estimation

R. Di Mari, R. Rocci, S.A. Gattone

Fuzzy clustering through robust Factor Analyzers

L.A. García-Escudero, F. Greselin, A. Mayo-Isicar

Spatial Outlier Detection using GAMs and Geographical Information Systems

A. García-Pérez, Y. Cabrero-Ortega

14:40-16:00 Contributed session: Probability and statistics (Room: Sala degli Affreschi)

Chair: G. Coletti

The Qualitative Characteristics of Combining Evidence with Discounting

A. Lepskiy

Dispersion measures and multidistances on R^k

J. Martín, G. Mayor

Asymptotic results for sums of independent random variables with alternating laws

C. Macci

16:00-16:10 Closing ceremony (Room: Sala del Chiostro)