Enric Trillas, a pioneer of fuzzy logic, Honoris Causa by the Public University of Navarre

Public University of Navarra, Spain

Enric Ruiz Trillas (Barcelona, 1940), a scientific expert in fuzzy logic and artificial intelligence, has been named on December 5, 2013 Doctor Honoris Causa from the Public University of Navarra due to his outstanding scientific record. The agreement was unanimously adopted at the meeting of the Governing Council of the University, held that day.

Enric Trillas is a Spanish pioneer in fuzzy logic and one of the first European researchers in this field of science, which tries to get that machines are able to mimic human reasoning. Advances in this field of research are particularly valuable for the development of artificial intelligence applications, since the theoretical models designed by scientists allow machines to handle imprecise information and make decisions in a similar way as the human brain does.

Enric Trillas studied at the University of Barcelona, where he graduated in 1964 and he got his Ph.D. in Science (Mathematics section) in 1972. In 1974, he became a professor at the Polytechnic University of Catalonia, institution where he held various academic positions such as deputy director of the School of Architecture, Dean of the Faculty, Vice Chancellor for Academic Affairs (1980 - 1982) and Vice Chancellor of University Extension (1982-1983).

In 1989 he moved to the Technical University of Madrid, where in 1990 he took up the Chair of Computer Science and Artificial Intelligence in the Faculty of Computer Science. There he worked in the Department of Artificial Intelligence until 2006.

He has been president of the Spanish Higher Council for Scientific Research (CSIC), between 1984 and 1988; general manager and vice president of the Spanish National Institute for Aerospace Technology (INTA), from 1989 to 1995; general secretary of the Spanish National Scientific and Technological Research Plan and Secretary of the Spanish Interministerial Commission of Science and Technology from 1995 to 1996. He has also been and president of the Aerospace Engineering Services (INSA) company.


Enric Trillas has been awarded the three major prizes in the field of fuzzy logic: the “Pioneer Award” of the European Society for Fuzzy Logic and Technologies (EUSFLAT) in 1999, the Fellow of the International Fuzzy Systems Association (IFSA) in 1999, and the Pioneer Award Fuzzy Systems from the IEEE Computational Intelligence Society, in 2005.

He also holds several awards as, for instance, the Order of Merit of the Italian Republic “Large Ufficiale” category (1986), the Grand Cross of Aeronautical Merit (1991) and the Narcís Monturiol Medal for scientific and technological merit granted by the Generalitat de Catalunya (2000).

Currently, Enric Trillas is an emeritus researcher at the European Centre for Soft Computing in Mieres (Asturias).
Laura Garrido defended her PhD Thesis entitled ‘Approximation of fuzzy random sets seen from an ontic perspective’. Her supervisor is Inés Couso from the University of Oviedo.

Fuzzy random sets represent random experiments where the outcomes are fuzzy sets. In this work, fuzzy sets have a “conjunctive” reading and they are seen as complex entities, where the degree of membership of each element of the universe evaluates to what extent it participates to the global entity. In our setting, there is a further source of uncertainty: we cannot directly observe the elements of the universe, but we just observe the value of a (collection of) attributes associated to it. The attribute generates a partition formed by equivalence classes of indistinguishable elements (two elements are indistinguishable when they are associated to the same value of the attribute). In this setting, our incomplete information about each fuzzy outcome is naturally represented by means of a pair of nested fuzzy sets called the lower and the upper approximations that determine a collection of fuzzy random sets, one of which is the “right” one. The main goal of this PhD thesis is to find the best characterization of the information about the probability distribution induced by the fuzzy random set, as well as about some remarkable parameters (expectation, variance, etc.). The first chapter provides a formal relational study about measures of (dis)similarity between fuzzy sets, needed in the rest of the paper. The second chapter explores the notions of “expectation” and “dispersion” of fuzzy random sets, leading to the notions of “centroid” and “pair-wise expected dissimilitude”. The last chapter studies the characterization of the probability distribution induced by the fuzzy random set, and provides a tool to quantify the accuracy of the information provided about the fuzzy random set, based on the expected dissimilitude between the pair of lower and upper approximations.
CALLS

FSTA 2014 The twelve international conference on Fuzzy Set Theory and Applications

Liptovský Ján (Slovak Republic) 26-31 January 2014

Abstracts
All accepted abstracts will be published in the Conference Proceedings which will be available at the beginning of the conference.

General information
Language: The official conference language will be English. Simultaneous interpretation will not be available.
Venue: Lectures and sessions will take place at the Hotel SOREA Mát in Liptovský Ján. The opening ceremony will begin on Monday morning, January 27, 2014 at 9 a.m. The conference is expected to end on Friday noon, January 31, 2014.
Accommodation: The conference, including accommodation of the participants and accompanying persons, will take place at the Hotel SOREA Mát in Liptovský Ján. Room and board (five nights lodging, breakfasts, lunches and dinners from Sunday evening, January 26, 2014 till Friday afternoon, January 31, 2014) are provided.
Social and cultural events: The Organizing Committee will prepare an excursion, a concert and a reception for participants and accompanying persons. The region of Liptovský Ján is a starting point for visiting different parts of the central Slovakia. There are several possibilities to go for individual trips to the High or Low Tatras. The hotel swimming pool with thermal water and fitness centre will be open (free of charge) for all conference participants and accompanying persons.

Organizing committee
Chair: Ladislav ŠPEKY (ladislav.sipeky@stuba.sk), managing director of SIPKES
Members: Tomáš BACIGÁL, Gejza JENCA, Peter STRUK, Andrea STUPNANOVÁ

International Scientific Programme Committee
Honorary Chairman: ZADEH Lotfi A. (U.S.A.)
Chair persons: KLEMENT Erich Peter (Austria), MEŠAR Radko (Slovak Republic), SAMINGER-PLATZ Susanne (Austria)

Scientific Programme
The Conference Scientific Programme will consist of special invited plenary lectures, invited and contributed parallel sessions. Rooms can be provided for workshops and special invited sessions during the conference.
CALLS

LINZ 2014 Graded Logical Approaches and their Applications. 35th Linz Seminar on Fuzzy Set Theory

Bildungszentrum St. Magdalena, Linz (Austria) 18-22 February 2014


Since their inception in 1979 the Linz Seminars on Fuzzy Sets have emphasized the development of mathematical aspects of fuzzy sets by bringing together researchers in fuzzy sets and established mathematicians whose work outside the fuzzy setting can provide direction for further research. The philosophy of the seminar has always been to keep it deliberately small and intimate so that informal critical discussions remain central.

LINZ 2014 will be the 35th seminar carrying on this tradition and is devoted to the theme "Graded logical approaches and their applications". The goal of the seminar is to present and to discuss recent advances of graded logical approaches and their various applications. Accordingly, the topics of the Seminar will include but not be limited to:

- Logical aspects of (fuzzy) rough sets and fuzzy concept lattices
- Weighted and fuzzy automata

Invited speakers

The following invited speakers (in alphabetic order) have already confirmed their participation:

- Stefano Aguzzoli, University of Milan (Italy)
- Ioana Leustean, University of Bucharest (Romania)
- Didier Dubois, IRIT-CNRS (France)
- Gabriele Kern-Isberner, University of Dortmund (Germany)
- Rafael Peñaloza, University of Dresden (Germany)
- Anna Zamansky, University of Vienna (Austria)

The “Linz” tradition has these key features: the number of participants of the Linz Seminars is usually bounded above by 40 with broad international representation and a mix of pure and applied interests; there are no parallel sessions so that all participants focus on each presentation and fully engage in each topic; and there is ample time for discussion of each presentation, with follow-up round tables for discussion of open problems and issues raised in the talks.

Program chairs

Tommaso Flaminio, Varese, Italy
Lluis Gozo, Barcelona, Spain
Siegfried Gottwald, Leipzig, Germany

Program Committee

Bernard De Baets, Gent, Belgium
Didier Dubois, Toulouse, France
János Fodor, Budapest, Hungary
Michel Grabisch, Paris, France
Petr Hájek, Praha, Czech Republic
Ulrich Höhle, Wuppertal, Germany
Erich Peter Klement, Linz, Austria
Wesley Kitzé, Grahamstown, South Africa
Radko Mesiar, Bratislava, Slovak Republic
Daniele Mundici, Firenze, Italy
Endre Pap, Novi Sad, Serbia
Stephen E. Rodabaugh, Youngstown, OH, USA
Susanne Saminger-Platz, Linz, Austria
Aldo Ventre, Napoli, Italy
Siegfried Weber, Mainz, Germany
CALLS

ISCAMI 2014 International Student Conference on Applied Mathematics and Informatics

Malenovice (Czech Republic) 27-30 March 2014

Purpose of the Conference

International Conferences for Undergraduate and Graduate Students of Applied Mathematics (SCAM/ISCAM) were organized by two faculties of the Slovak University of Technology in Bratislava. Professor Zdenka Riecanová from the Faculty of Electrical Engineering and Information Technology and professor Radko Mesiar from the Faculty of Civil Engineering were guarantors of these conferences in years 1999-2007. The original idea was to bring together graduate students in various areas of mathematics relevant for applications.

After one-year pause, the ISCAM is again organized in a new guise. Since 2009, the ISCAMI extends its scope by informatics and it is co-organized by the Department of Mathematics of Faculty of Civil Engineering (Slovak University of Technology in Bratislava) represented by Radko Mesiar and by the Institute for Research and Applications of Fuzzy Modeling (University of Ostrava) represented by Vílem Novák. Venue will alter every year between Bratislava to keep the original nature and tradition of the ISCAM conference and an unspecified locality situated in mountains close to Ostrava to provide participants with manifold surroundings.

ISCAMI 2014 will be organized in Malenovice - a beautiful village situated on the root of the Lysá hora mountain, the highest mountain in Beskydy mountains.

Publications

Based on the quality and the topics of contributions, chosen participants will be invited to submit papers in English to special issues of international journals.

Summer School

In 2014, based on the decision of the organizing committee and the successful experience from 2012 and 2013, ISCAMI will be organized jointly with the 3rd Summer School on Applied Mathematics and Informatics. This means that the programme will alter between sections with student contributions and blocks of tutorials given by invited prominent researchers. This activity as well as the whole conference is supported by the A-MATH-NET project.

Dates and Deadlines

• Early registration deadline: February 1, 2014
• Submission of abstracts: February 1, 2014
• Notification of acceptance: February 15, 2014
• Registration deadline: March 1, 2014
• Conference: March 27-30, 2014

Topics (suggested, but not limited to)

• Theory, methods and tools

• Application fields
Committees

Honorary Chair
Zdenka Riecanová (Slovak University of Technology)

General Chairpersons
Vilém Novák (University of Ostrava)
Radko Mesiar (Slovak University of Technology)

Programme Chairs
Irina Perfilieva (University of Ostrava)
Jiří Kupka (University of Ostrava)

Financial Chair
Martin Štepnička (University of Ostrava)

Organizing Chair
Petra Hodáčová (University of Ostrava)

Local Organizing Committee
M. Baboský
A. Dvůřák
M. Dyba
P. Hurtík
V. Pavlíška
P. Rusnok

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U. Bodenhofer (Austria)
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A. Dvurečenskij (Slovakia)
P. Esteva (Spain)
L. Godo (Spain)
P. Hanáček (Czech Republic)
J. Hančel (Czech Republic)
I. Horová (Czech Republic)
B. Jayaram (India)
S. Jendrów (Slovakia)
M. Kalina (Slovakia)
A. Klemenčová (Czech Republic)
E.P. Klement (Austria)
D. Kolář (Czech Republic)
T. Kroupa (Czech Republic)
L. Mišík (Czech Republic)
M. Navara (Czech Republic)
J. Paseka (Czech Republic)
M. Pokorný (Czech Republic)
B. Riečan (Slovakia)
O. Rossi (Czech Republic)
S. Saminger-Platz (Austria)
A. Sokolov (Poland)
P. Sosák (Czech Republic)
D. Ševčovič (Slovakia)
A. Šostak (Latvia)
I. Štajner-Papuga (Serbia)
J. Talasová (Czech Republic)
T. Vetterlein (Austria)
M. Wagenknecht (Germany)
N. Yarushkina (Russia)
Z. Zmeškal (Czech Republic)
CALLS

ABLAT 2014 International Symposium on Aggregation on Bounded Lattices

Trabzon (Turkey) 16-20 June 2014


The goal of the symposium is to present and discuss the recent advances in aggregation operators on bounded lattices accordingly, the topics of the symposium will include but not be limited to:

- **Theoretical aspects:**
  - Properties of aggregation functions
  - New forms of aggregation functions
  - Copulas and triangular norms
  - Fuzzy measures and integrals
  - Averaging aggregation operators
  - Aggregation on ordinal and on nominal scales
  - Aggregation functions for extensions of fuzzy sets
  - Implication operators

- **Practical aspects:**
  - Security intelligence, analysis and decision support
  - Evaluation problems
  - Medical decision problems
  - Hybrid intelligent systems and computational intelligence
  - Approximate reasoning
  - Image processing
  - Model identification and parametization
  - Diagnostics and prognostics
  - Data mining

The invited speakers of the symposium include:

- Miguel Couceiro, France
- Bernard DeBaets, Belgium
- Mustafa Demirci, Turkey
- Djavvat Khadjiev, Turkey
- Radko Mesiar, Slovak Republic
- Ismail Burhan Türksen, Turkey

**International program committee**

B. Bedregal, Brazil

G. Deliakov, Australia

R. Belohlavek, Czech Republic

H. Bustince, Spain

M. Couceiro, France

B. DeBaets, Belgium

G. DeCooman, Belgium

M. Demirci, Turkey

D. Dubois, France

J. Dujmovic, USA

R. Ghiselli-Ricci, Italy

M. Grabisch, France

S. Greco, Italy

B. Jayaram, India

G. Jenca, Slovak Republic

F. Karaçal, Turkey

D. Khadjiev, Turkey

E. P. Klement, Austria

A. Kolesarova, Slovak Republic

G. Mayor, Spain

R. Mesiar, Slovak Republic

M. Navara, Czech Republic

M. Nesibe Kesicioglu, Turkey

S. Saminger-Platz, Austria

V. Torra, Spain

I.B. Türksen, Turkey

R. Yager, USA

A. Zemánková, Slovak Republic
The IPMU conference is organized every two years with the focus of bringing together scientists working on methods for the management of uncertainty and aggregation of information in intelligent systems. It provides a medium for the exchange of ideas between theoreticians and practitioners in these and related areas.

Topics and Scope of the Conference

- **Theory, Methods and Tools:**
  - Uncertainty, Bayesian and Probabilistic Methods, Information Theory, Measures of Information and Uncertainty, Evidence and Possibility Theory, Utility Theory, Fuzzy Sets and Fuzzy Logic, Rough Sets, Multiple Criteria Decision Methods, Aggregation Methods, Knowledge Representation, Approximate Reasoning, Non-classical Logics, Default Reasoning, Belief Revision, Argumentation, Ontologies, Uncertainty in Cognition, Graphical Models, Knowledge Acquisition, Machine Learning, Evolutionary Computation, Neural Networks, Data Analysis.

- **Application Fields:**

IPMU-2014 solicits original research contributions of theoretical and methodological nature as well as application-oriented work. IPMU-2014 will not accept any paper which, at the time of submission, is under review or has already been accepted for publication in a journal or another conference. Authors are also expected not to submit their papers elsewhere during the review period. Contributions will be selected based upon their quality as evaluated by 2-3 referees.

**Special Sessions**

- Aggregation Functions
- Big Data - the Role of Fuzzy Methods
- Information Fusion Systems
- Fuzzy Measures and Integrals
- Soft Computing in Image Processing
- Intelligent Databases and Information Systems
- Intelligent Measurement and Control for Nonlinear Systems
- Imprecise Probabilities: From Foundations To Applications
- Management of Uncertainty in Social Networks
- Fuzzy implication functions
- Decision Support and uncertainty management in Agri-Environment
- Soft Computing and Sensory Analysis
- Uncertainty and Imprecision on the Web of Data
- Uncertainty Management in Machine Learning
- Affective Computational Intelligence
- Fuzzy Logic in Boolean framework
- Philosophy and History of Soft Computing
- Fuzzy Logic, Formal Concept Analysis and Rough Sets
- Formal Methods for Vagueness and Uncertainty in a Many-Valued Realm

**Important dates**

- October 14, 2013: Submission of special sessions
- December 31, 2013: Submission of papers
- February 24, 2014: Notification of acceptance
- March 31, 2014: Submission of camera-ready versions of accepted papers
CALLS

**SMPS 2014 7th International Conference on Soft Methods in probability and statistics**

Warsaw (Poland) 22-24 September 2014

[SMPS 2014 logo]


**Scope**

Probability and statistics were the only well-founded theories of uncertainty for a long time. However, during last forty years, in such areas like decision theory, artificial intelligence or information processing, numerous approaches extending or orthogonal to the existing theory of probability and mathematical statistics have been successfully developed. These new approaches have appeared, either on their own like fuzzy set theory, possibility theory, rough sets, or having their origin in probability theory itself, like imprecise probability, belief functions, fuzzy random variables.

The common feature of all those attempts is to allow for a more flexible modelling of imprecision, uncertainty, vagueness and ignorance. The proposed new methods are softer than the traditional theories and techniques because being less rigid they more easily adapt to the actual nature of information.

Wide range of applications still reveals the need for soft extensions of classical probabilistic and statistics tools. For example, in data analysis and data mining it is becoming increasingly clear that integrating fuzzy sets and probability can lead to more robust and interpretable models which better capture all kinds of the information contained in data. Also, in science and engineering the need to analyze and model the true uncertainty associated with complex systems requires a more sophisticated representation of ignorance than that provided by uninformative Bayesian priors.

Several years ago, the need was felt to establish a recurrent forum for exchanging of ideas and discussing new trends that enlarge the statistical and uncertainty modelling traditions, towards a flexible and more specific handling of incomplete or subjective information. This idea resulted in a series of biannual international conferences on Soft Methods in Probability and Statistics (SMPS), organized for the first time in Warsaw in 2002. Subsequent events in this series took place in Oviedo (2004), Bristol (2006), Toulouse (2008), Oviedo/Mieres (2010) and Konstanz (2012).

The 7th International Conference on Soft Methods in Probability and Statistics - SMPS 2014 returns to Warsaw, the capital of Poland. The conference will be organized by the Polish Operational and Systems Research Society, Systems Research Institute of the Polish Academy of Sciences and Faculty of Mathematics and Information Science of Warsaw University of Technology.

The aim of the conference is to bring together theoreticians and practitioners working on soft probability, statistics and data analysis. Topics and scope of the SMPS conference include but are not limited to:

- Analysis of Censored Data
- Analysis of Fuzzy Data
- Clustering and Classification
- Dempster-Shafer Theory
- Fuzzy Random Variables
- Fuzzy Regression Methods
- Graphical Models
- Imprecise Probabilities
- Machine Learning
- Possibility Theory
- Random Sets / Random Fuzzy Sets
- Robust Statistics
- Rough Sets in Data Analysis
- Soft Computing and Statistics
- Statistical Software for Imprecise Data
- Triangular Norms and Copulas

**Invited speakers**

Eyke Hüllermeier
Inés Couso
Bernard De Baets

**Important Dates**

- Paper Submission Start: February 1, 2014
- Paper Submission End: March 15, 2014
- Notification of Acceptance: April 28, 2014
- Final Paper submissions: May 17, 2014
- Early Registration End: May 31, 2014
- Conference: September 22-24, 2014

(Welcome Party, Sunday evening, September 21, 2014)

**Committees**

**Executive Board**:

- María Ángeles Gil (Oviedo, Spain)
- Przemysław Grzegorzewski (Warsaw, Poland)
- Olgierd Hryniewicz (Warsaw, Poland)

**Organizing Committee**:

- Przemysław Grzegorzewski - general chair
- Marek Gagolewski - publication and conference website chair

**Program Committee**:
7th International Conference on
Soft Methods
in probability and statistics

CALLS
MDAI 2014 11th International Conference on Modeling Decisions for Artificial Intelligence
Tokyo (Japan) 29-31 October 2014

Web page: http://www.mdai.cat/mdai2014

Important Dates
Submission deadline: March, 24th 2014
Acceptance notification: June, 8th 2014
Final version: June, 26th 2014
Conference: October, 29-31 2014

Aims and goals
The aim of the MDAI conference series is to provide a forum for researchers to discuss models for decision and information fusion (aggregation operators) and their applications to AI.

In MDAI 2014, we encourage the submission of papers on decision making, information fusion, game theory, and related topics. Applications to privacy technologies as well as real world problems are welcomed.

This conference is CORE-B in the CORE 2013 Australian ranking.

• Methods and Tools:
  • Information fusion
  • Aggregation operators
  • Utility and decision theory
  • Model and operator selection
  • Learning methods for parameter determination
  • Machine learning and statistical learning
  • Soft computing
  • Optimization methods in AI and decision modeling
  • Non-additive measures and integrals

• Applications:
  • Data privacy
  • Multiagent systems
  • Social networks
  • Data mining
  • Bibliometry
  • Autonomous robots
  • Entertainment computing
  • Subjective evaluation
Bioinformatics
Information access

Submission and Publication
Original technical contributions are sought. Contributions will be selected on the basis of their quality. Papers should not exceed 12 pages in total (using LNCS/LNAI style). Proceedings with accepted papers are expected to be published in the LNAI/LNCS series (Springer-Verlag) and distributed at the conference, as done in previous MDAI conferences. See LNAI volumes 3131, 3558, 3885, 4617, 5285, 5861, 6408, 6820, 7647, and 8234. Besides, papers, that according to the evaluation of the referees, are not suitable for the LNAI but that have some merits will be published in a USB proceedings (with ISBN) and scheduled in the MDAI program.

Contact
mdai@mdai.cat

Committees

General chair:

Yasunori Endo (U. Tsukuba)

Program co-chairs:
Vicenc Torra (IIIA-CSIC, Catalonia, Spain)
Yasuo Narukawa (Toho Gakuen, Japan)

Advisory Board:
B. Bouchon-Meunier, D. Dubois, L. Godo, K. Hirota, J. Kacprzyk, S. Miyamoto, M. Sugeno, R. R. Yager

Program Committee:
Gleb Beliakov, Gloria Bordogna, Tomasa Calvo, Susana Diaz, Josep Domingo-Ferrer, Jozo Dujmovic, Katsushige Fujimoto, Michel Grabisch, Enrique Herrera-Viedma, Aoi Honda, Masahiro Imuguchi, Xinwang Liu, Jun Long, Jean-Luc Marichal, Radko Mesiar, Tetsuya Murai, Toshiaki Murofushi, Guillermo Navarro-Arribas, Michael Ng, Gabriella Pasi, Susanne Saminger-Platz, Sandra Sandri, Roman Slowinski, Laszlo Szilagyi, Aida Valls, Vilem Vychodil, Zeshui Xu, Yuji Yoshida

Organization chairs:
Kenichi Yoshida and Kazuhiko Tsuda (Univ. of Tsukuba)