Mathware & Soft Computing

The magazine of the European Society for Fuzzy Logic and Technology

Interview with Enric Trillas

By Luka Eciolaza

60 Years of Fuzzy Sets and 85 Years of Enric Trillas

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New Editor-in-Chief of IJUFKS

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EUSFLAT
EUROPEAN SOCIETY FOR FUZZY LOGIC AND TECHNOLOGY

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MESSAGE FROM THE PRESIDENT (March 2026)

JOSÉ MARÍA ALONSO MORAL

Dear colleagues,

In Riga, a new board was elected, and I had the privilege to become President of our society. I want to express, once again, my gratitude to those who believed in me, especially to those who accepted the challenge to serve on the new board. After more than 20 years as an EUSFLAT member, becoming the President of our society is an honor and a big responsibility. During the first months of our term, we had to work hard in the shadows to renew the webpage, the mailing distribution list, the bank account, setting up a new workspace... sorry for any inconvenience this may have caused. Anyway, I hope all these updates together will help our society in the future.

The EUSFLAT society, with more than 25 years of existence, has become more than a scientific non-profit association. Those who regularly attend the bi-annual conference, as well as the related endorsed events, form a family where young researchers can learn from the elders with scientific rigor in a vibrant and friendly atmosphere. We all miss those who have passed away and are no longer with us, but they will remain in our memory forever.

The best way to strengthen collaboration between young and senior researchers is to promote and support mentoring activities, such as the EUSFLAT Summer School (SFLA). This year, we are organizing the 7th edition of SFLA, to be held in conjunction with the Polish Society for Fuzzy Sets (POLFUZZ) in Warsaw, Poland. Mark your calendar (6-10 July 2026) and encourage young researchers to attend.

As a scientific community, we must be proud of our past achievements. Fuzzy Logic and Technology have proven robust and mature, successfully handling uncertainty and imprecise reasoning. We have already celebrated 60 years of theoretical and practical contributions, and it is now time to look to the future with hope, even as we live in a highly unstable world marked by geopolitical tensions and wars worldwide.

In the age of Artificial Intelligence (AI), as big companies invest a lot in foundational models, other communities focus on deep learning and related data-driven approaches that are hardly sustainable and computationally very expensive, the fuzzy community is developing human-centric trustworthy AI-based tools to shape a fuzzy world where computing with (vague) words and mastering imprecision and uncertainty are increasingly important. Not only technical, but also ethical and legal issues need to be carefully addressed to make AI accessible and useful to citizens worldwide. I am convinced that our community can play an important role in this context. To do so, we must all work to make fuzzy logic and technology better known within the broader AI community.

If you have ideas, comments, or suggestions to propose new initiatives that may benefit EUSFLAT members, please contact me or any of the board members. Otherwise, the annual assembly will be in mid-June during IPMU 2026, Rome, Italy. You are all encouraged to attend this event at the Sapienza University of Rome, but we will also provide online access via the new workspace for EUSFLAT members who cannot attend in person. Moreover, during the assembly, we will share further details about the Joint Conference IFSA-EUSFLAT, to be held in Bari, Italy, in September 2027!

Looking forward to seeing you in Rome and/or at any other related meeting where we can talk and exchange ideas.

Jose Maria Alonso Moral
President of EUSFLAT

LETTER FROM THE EDITOR-IN-CHIEF (March 2026)

HUMBERTO BUSTINCE

Dear readers:

Once again, here you have in your screens the new issue of our Mathware&Soft Computing magazine has arrived to your computers. And, once again, we have done our best to provide an image of the life of our community.

Let me specially focus on the interview with Enric Trillas. All of us know he is a huge referent not only of the history of the EUSFLAT community, but also of its present, since many of us have learnt a lot from him. So, it is a great honor for me to bring him again to these pages, and I am sure we all will read with a lot of interest his words.

One of the main purposes of our magazine is to promote and disseminate scientific activities. In this sense, this issue comes with several calls for and reports of conferences where our community is present. But, since there are many more places where we also share our work, let me take advantage from this opportunity to, again, ask for your collaboration, sending any information that can be of interest for the community. The more conferences we attend, the more workshops we take part, the more visibility our community will gain. And, as discussed several times between us, it is very important that we go out from our comfort area, that we show our work to other communities so that they can know what we do and we can also learn what they are doing. In this way, our community will get more life and we can provide all those valuable techniques and concepts that we master and that can be so useful in this time of fast development of artificial intelligence for which we can say so much.

Such a relevant date for us is appropriate for a reflection. And, in this issue, that you are about to read you can find a very interesting overview with reflections and views from former presidents of the EUSFLAT Society. All of them make it possible for our society to be where it stands, and their thinking is of great value for our future. Thanks a lot to Susana and Luis for this nice work!

I want to finish recalling, as always, that this magazine is your magazine, our magazine, and that only with your help and collaboration, new issues will be possible. So, the pages of the magazine are open to any contribution you consider, any idea you want to communicate. All of you, all of us are welcome.

And now, it's time to enjoy our Mathware&Soft Computing magazine!!

Humberto Bustince
Editor-in-chief

INTERVIEW

Interview with Enric Trillas

By Luka Eciolaza

Luka Eciolaza: How did you begin your research in the field of fuzzy logic, and what have been your most important contributions?

Enric Trillas: After working on lattice-ordered semigroups and later on the values of “distances or metrics”, whether numerical, linguistic, set-theoretic, or probabilistic, in 1974 I discovered fuzzy sets through an article in *Le Figaro* featuring Arnold Kaufmann, which reminded me of Karl Menger’s 1950s work on “hazy sets.” Intrigued by Kaufmann’s “fuzziness indices,” I traced the concept to Lotfi Zadeh’s 1965 article *Fuzzy Sets in Information and Control*, which fascinated me because of its connection to the imprecision of language–a perspective logicians had largely ignored. I also found the 1972 article by Aldo De Luca and Settimo Termini on fuzziness indices, and from then on, I was captivated by these ideas. In 1977, I organized a conference in Barcelona and invited Zadeh, whose visit sparked fuzzy logic research among many Spanish investigators, marking the beginning of my long engagement with the field.

My main research contributions have been related to 1) connectives, 2) fuzzy entropy and 3) the concept of fuzzy sets. I worked on connectives by establishing strong negation functions and, with the unfortunately late Claudi Alsina, introduced t-norms and t-conorms to explore how classical logical laws persist in the fuzzy world. One notable result was showing that von Neumann’s law of perfect distribution can hold locally with imprecise statements, even though non-contradiction and excluded middle generally fail. I was also interested, jointly with Sergei Ovchinnikov and Teresa Riera, in Fuzzy Preorders that Llorenç Valverde characterized in his Ph.D. made under my supervision.

Beyond Fuzzy Logic, I studied reasoning more broadly since the late 20th century. Reasoning isn’t just deduction and refutation–it’s especially about conjecturing and seeking speculations. I defined induction as an "inferential zigzag" alternating deduction with abduction around a premise, like "Brownian motion." I actually managed to define induction, which had resisted definition until then.

I established what I call the "skeleton" of common sense reasoning–the minimal set of universal axioms followed in language. This skeleton not only allows defining conjecture and refutation but also proves Aristotle’s ancient principles of non-contradiction and excluded middle, which Aristotle himself claimed were unprovable "principles."

From the moment I read Zadeh’s first article, I carried a "fierce doubt" for over forty years. His definition of fuzzy sets, adopted by everyone working with them, relies on membership functions that aren’t unique–leaving the concept theoretically senseless, since one fuzzy set is simultaneously many fuzzy sets. Inspired by my late friend Michio Sugeno’s work on fuzzy measures and integrals, and my study on fuzzy entropy of *de De Luca-Termini*, I finally found a solution: fuzzy sets are linguistic entities definable as graphs admitting diverse measures. While rigid, classical sets have roots in the world (a basket of cherries), fuzzy sets have roots in our minds (Raquel is beautiful)–they refer to linguistic entities. When I published these ideas, I felt relieved; I had finally answered that initial question completely.

Enric Trillas and Settimo Termini

LE: You have had the good fortune to work with and maintain friendships with outstanding figures in the scientific world. What have your personal and professional relationships with these globally influential scientists been like? In what ways have they influenced not only your academic career, but also your way of understanding science and life? Is there any particular anecdote or lesson that left a special mark on you through your interactions with these personalities?

ET: I believe that in several of these relationships–which were neither all-encompassing, nor uniform, nor simultaneous–I was, and still am, the first and only beneficiary, not only through personal contact but especially through having had the opportunity to hear their own words about their own work.

Perhaps I should give special value to some of these relationships; allow me to do so with those involving Lotfi Zadeh, Settimo Termini, Abe Mamdani, and Francesc Sales, my doctoral supervisor, whose influence I believe I can still perceive despite the great temporal distance. There is yet another influence, that of Karl Menger, prior to Zadeh’s, to whom I owe–besides the impact of his work, mathematical, philosophical, and even historical–nothing less than having

been able, at a very young age, to enter an international circuit of scientists; later, and thanks to that help, it was no longer difficult for me to enter other such circuits.

However, there are many more influences in my intellectual life, some of them very important, that did not arise from personal contact but rather through their written works: Russell, Wittgenstein, Chomsky, Birkhoff, and many others. In this regard, I recall a phrase by the novelist Enrique Vila-Matas:

"Let us not deceive ourselves, we always write after others."

I have done what I could and what I knew how to do, but I owe much to many; paraphrasing Winston Churchill at the time of the Battle of Britain, *"Never have so many done so much for one alone."*

LE: Do you think there is a common thread running through all your research? Is there something you have sought to understand in depth through research–for example, how we think, how we reason, how we learn?

ET: I believe that, above all, the driving force behind my work has been curiosity. Without it, I do not think I would have been interested in what I have done. But curiosity arises from already knowing something; without knowing anything beforehand, I do not see how one can feel curiosity about something specific. Had I not read certain things about imprecision and vagueness in philosophy, I doubt that Zadeh would have captured my attention and interest as he did–something that was, in a way, a "love at first sight," an interest that, despite various detours, still endures.

Curiosity, which I consider indispensable, is not the guiding thread you refer to, but rather a detonator. As for your question, I have always tried to understand in depth whatever I investigated, and regarding a deeper motivation, I suspect that it evolved over time until, at the beginning of the 21st century, it crystallized into the establishment of what I consider the skeleton of reasoning and the search for its consequences, with the aim of proposing a new "natural science" of language and reasoning–something like "physics" that, instead of experimenting with and referring to matter, motion, and energy, would refer to thought, language, and reasoning.

This is a science that I do not believe myself capable of developing, or even beginning, but for which I think that several things I have written may be illustrative. Among them is the mathematical modeling of a complex sentence taken from a novel by a writer for whom I feel great admiration, Enrique Vila-Matas, reducing its meaning to a single formula involving measures of the meaning of the key words it contains. I also leave some examples of how implication functions and indistinguishability functions may be used to approach possible models of "thought," which–unlike reasoning–is not always linguistic but often figurative and almost always relational; that is, an attempt at an approximation through fuzzy relations, both in their qualitative aspect using graphs and in their quantitative aspect using measures or membership functions.

LE: How would you define thought and reasoning? How do they differ?

ET: I think the answer must come from neuroscience, and I suspect that we do not yet fully possess it. Therefore, take what I am about to say as nothing more than a personal opinion arising from my own experience and readings.

I would venture to suggest that thought is a consequence of the functioning of the brain and perhaps equivalent to that functioning; it is not independent of the brain's capacity to store memories. I would also say that, on many occasions, it displays a relational character and is almost always driven and intertwined with desires that are not always conscious on the part of the thinking subject. This relational character frequently becomes apparent when reasoning by similarity, through analogies that sometimes translate into metaphors leading to creativity.

I see reasoning as a specialization of thought when a goal is pursued, when one is focused on wanting to know what one does not yet know on the basis of what one already knows, in the search for the unknown starting from the known.

Reasoning is a specialization of thought that I do not believe to be possible without language, and I suspect that both–speaking and reasoning–begin to be learned together at a very early age. In short, I "see" reasoning, as I did with my colleagues and friends Settimo Termini and Marco Elio Tabacchi, as "language in action." I would allow myself to recommend the book *E. Trillas, S. Termini, M. E. Tabacchi (2023)*, **Reasoning and Language at Work: A Critical Essay**, Springer.

As I read in the book *U. Sandler, L. Tsitolovsky (2008)*, **Neural Cell Behavior and Fuzzy Logic**, Springer, fuzzy logic seems to play a notable role in describing how neurons function–something I myself had often suggested, believing that this is not a digital but an analog phenomenon. This is something that, in my opinion, the "devotees" of "General Artificial Intelligence" should take into account.

LE: Six decades after Zadeh established fuzzy logic, the field continues to generate debate. While some researchers see saturation in traditional research lines and fewer disruptive ideas, others remain optimistic about its potential across various applications, with advances emerging from integrating uncertainty into data analysis and AI techniques like fuzzy c-means clustering and fuzzy k-nearest neighbor. Although fuzzy logic originally focused on representing expert knowledge through IF–THEN rules, its role has shifted toward data-driven machine learning, revealing limitations in automated learning and knowledge acquisition. Its future relevance, I believe, will depend on practical usefulness and tangible value beyond academia. From your perspective, how do you see the future of fuzzy logic and its impact on modern AI and applied research?

ET: Yes, applications are important, as demonstrated by the case of Fuzzy Control itself, but I do not think one can speak of application unless a theory is being applied–and in Fuzzy Control, that theory is the one provided by Zadeh, Sugeno, and others.

Zadeh's passing in 2017 contributed greatly to the waning interest in fuzzy logic, as his constant presence and fresh ideas had long inspired the community. He introduced influential concepts like fuzzy logic in a "broad" versus "strict" sense, "Computing with Words and Perceptions," and "Soft Computing," sparking papers and debates worldwide. Known for his extraordinary dedication and charm, he could speak across continents in a single quarter and work almost anywhere while staying up to date in computer science. His charisma and personal anecdotes illustrate the unique and unforgettable character he brought to both his work and interactions.

What I do not agree with is the idea that fuzzy logic was introduced to deal with conditional statements, with IF/THEN rules. Zadeh introduced fuzzy sets to cope with imprecision, and his initial intention in speaking of logic was related to multivalued logic. It was quite some time after 1965, during the heyday of so-called "expert systems," that the importance of imprecise rules became evident. After all, Abe Mamdani himself worked on this, and when the British government cut funding for the then-emerging Artificial Intelligence following a negative report on its viability, he even had to retrain. It was after Mamdani and his student Assilian achieved automatic control of a steam engine that Fuzzy Control truly took off.

As for the "decline" in interest in fuzzy logic that some believe they see, one should also not forget the pressure exerted by the enormous current interest in Generative Artificial Intelligence. After all, tasks such as machine translation, which a few years ago seemed an insoluble problem, are now commonplace. That is to say, it does not seem strange to me that many people gravitate toward that field, in which, nonetheless, imprecision is present when attempting to mimic human beings. If they wish to master it, they will have to employ fuzzy logic.

LE: Observing that fields such as the control of dynamical systems have already adopted techniques like Takagi–Sugeno systems beyond the traditional fuzzy logic community, how do you think this kind of successful integration could be fostered in other disciplines? What strategies would you suggest for breaking down the silos between different research niches?

ET: I suppose that if it happens, it will be because some researcher in one of these new fields becomes interested in fuzzy logic. In the technological world, we are already far removed from the time when blood pressure monitors and rice cookers became popular, and even from the time when the Sendai subway operated automatically under fuzzy control. With a view to the integration you mention, the application of fuzzy logic to neuroscience and computation seems particularly interesting; these are concrete areas that may contribute unforeseen ideas to fuzzy logic itself.

But in those past times there were worlds of interest in medicine and in railway transport... I think that shows the way forward. A path that began by controlling something now as obsolete as a steam locomotive, by Abe Mamdani, who had just become aware of the possibilities of the "fuzzy" approach and had certain technological problems in mind. Let us not forget that Derek Assilian was trying to develop a doctoral thesis and kept pressing Mamdani to suggest a suitable problem–a problem they finally found after an intense weekend brainstorming around a steam engine model that was at Queen Mary College in London. Someone capable of bringing together such "research niches" must eventually emerge.

NEWS

60 Years of Fuzzy Sets and 85 Years of Enric Trillas

By Itziar García-Honrado and Rudolf Seising

On the topic of "Reviewing the last few years of AI and looking to the future", a meeting was held on May 30, 2025 in the Asturian town of Lugones, not far from the capital Oviedo, at which the 85th birthday of Enric Trillas was celebrated by many of his colleagues and friends from the fuzzy community.

Some participants at the event have completed their PhD studies with him: Juan Luis Castro, Alejandro Sobrino, José Ángel Olivas, Ana Pradera, Sergio Guadarrama, Eloy Renedo e Itziar García Honrado. Others participants worked with him in the Europen Centre for Soft Comuting: Claudio Moraga, Rudolf Seising, Luis Magdalena, Jose Alonso, Luka Eciolaza, María Ángeles Gil, Albert van der Heide, Ana Belén Ramos, Ángela Blanco, David Pérez Pancho, Fátima Zohra Hadjam, Antonio Álvarez, Manuel Rodríguez, Borja Gómez.

Other people shared large parts of their (not only) academic lives with Enric Trillas: Settimo Termini, Lluís Godo, Martín Pereira, Javier Montero, Alberto Bugarín and Marco Tabbachi.

In addition, members of the Faculty of Statistics at the University of Oviedo were among the participants: Ángeles Gil, Norberto Corral, Gloria Naval, Susana Díaz and Agustina Bouchet. As well as other colleagues and friends.

Enric Ruiz Trillas was born in Barcelona on March 29, 1940. In 1964, he completed his studies in mathematics at the University of Barcelona, where he also obtained his doctorate in 1972. The following year, he became a full professor of mathematics at the School of Architecture (ETSAB) of the Technical University of Barcelona. In 1982, he took over the Chair of Computer Science and Artificial Intelligence at the Polytechnic University of Catalonia. Here he was also Vice Dean from 1980 to 1983. He began to combine his teaching and research career with positions in scientific management, as he later did at the CSIC, where he was president from May 17, 1984 to October 10, 1988.

He has also been Director General of the National Institute for Aerospace Technology (1989-1995) and Secretary General of the National R&D Plan (1995-1996). He moved to Madrid to participate in the politics live of Spain as a director of the Higher Council for Scientific Research from 1984 to 1988. In 1990 he became Chair of Computer Science and Artificial Intelligence in the IT Faculty at the Madrid Polytechnic University. He was the founder and first president of the Engineering and Aerospatial Services company until 1996 and the first president of the National Microelectronics Center from 1985 to 1991.

Enric Trillas was one of the most important representatives of the fuzzy set theory, which was founded 60 years ago by Lotfi Zadeh at the University of California in Berkeley.

He studied vagueness measures and fuzzy entropies, in the lines of the works by Aldo De Luca and Settimo Termini. He published Papers on Entropies in finite fuzzy sets and the fuzzy integral in international journals in the 1970s. He considered fuzzy connectives, strong negations, t-norms and t-conorms and various algebras of fuzzy sets, especially he introduced the category of Basic Fuzzy Algebras.

Together with Lotfi Zadeh, Enric Trillas initiated the founding of the European Center for Soft Computing in Mieres, Asturias, not far from Oviedo and Lugones, at the beginning of the 21st century, which was closed in 2016.

Enric Trillas holds honorary doctorates from the Public Universities of Navarra and Santiago de Compostela. He has received several decorations and distinctions, including the Spanish Grand Cross of the Order of Aeronautical Merit, the Order of Merit of the Italian Republic, the Order of Merit of the Republic of Peru, and the Monturiol Medal of the Generalitat de Catalunya; the Cajal Medal from the CSIC; the Kampé de Fériet Medal; and the title of Fuzzy Pioneer from the European Society for Fuzzy Logic and Technology (EUSFLAT), of which he is an Honorary Member, and from the American IEEE-CIS.

Enric Trillas was also Director General of the National Institute of Aerospace Engineering (1989-1995) and Secretary General of the National R&D Plan (1995-1996). He moved to Madrid to participate in Spanish political life as Director of the Superior Council for Scientific Research from 1984 to 1988. In 1990, he became Chairman of Computer Science and Artificial Intelligence at the Faculty of Information Technology of the Polytechnic University of Madrid. He was founder and first president of Engineering and Aerospatial Services until 1996 and first president of the National Microelectronics Center from 1985 to 1991.

After the inauguration words by Agustina Bouchet the secretary of the CEISIA that supported the event, Susana Díaz, the subdirector of the Department of Statistics in University of Oviedo that also contribute to support the Event, Jorge Roces, the area director of Strategy and Units of Research and Itziar García-Honrado, the organizer of the event, Rudolf Seising (Munich, Germany) gave a talk on History of AI and fuzzy logic (1965-2025), followed by the first round tables with contributions from Claudio Moraga (Dortmund, Germany), Settimo Termini (Palermo, Sicily) and Marco Tabacchi (Palermo, Sicily). After lunch, a second round table followed with Sergio Guadarrama (Madrid), Jose Alonso (Madrid), Luka Ecioloza (Universidad de Mondragón) and Martín Pereira (Santiago de Compostela).

The discussions after all the talks repeatedly addressed the topic of large language models and the relationship between them and the theory of fuzzy sets.

Enric Trillas himself also took the floor several times, and at the end of the event, Maria Ángeles Gil, Ramón López de Mántaras and Itziar García-Honrado dedicated words of honor to him.

At the end of the event, Enric Trillas spoke about his joy and satisfaction at having contributed to society, particularly to the development of science, throughout his life. He also explained his commitment and passion for his work, which still allows him to maintain a solid work routine. As always in his speeches, he also dedicated a few words to the young people who would continue this work, encouraging them to continue developing and loving science and his work, taking into account the amazing development of artificial intelligence in recent years and the importance of continuing with mathematical foundations and basic research.

CONFERENCE REPORT

17th +FuzzyMAD meeting

December 13, 2024
Faculty of Mathematics, Complutense University, Madrid, Spain
https://eventos.ucm.es/125571/detail/fuzzymad-2024.html

Sponsored by:
Faculty of Mathematics, Complutense University of Madrid
Interdisciplinary Mathematics Institute, Complutense University of Madrid (IMI Data Science Club)
Ph.D. Program on Mathematical Engineering, Statistics and Operational Research (IMEIO)
Project PID2021-122905NB-C21 of the Government of Spain (FORAid)

The 17th edition of the FuzzyMAD meeting, was held in December 13, 2024, see https://eventos.ucm.es/125571/programme/fuzzymad-2024.html

This series of conference was initiated in 2008 with the objective of stressing the collaboration between soft computing researchers in the region of Madrid, and particularly to attract young researchers to our field, improving their multidisciplinary potential by taking advantage of the huge scientific community around Madrid despite those natural meeting difficulties that come with big cities. The FuzzyMAD series of conferences moved the name in 2018 into +FuzzyMAD, as a consequence of a big project that was born during a previous FuzzyMAD meeting, leaded by **Anibal R. Figueiras** (Carlos III University of Madrid), who unexpectedly died in 2022.

The number of participants in this +FuzzyMAD 2024 edition was 72 researchers, and the traditional structure of the conference was maintained: a course mainly oriented for Ph.D students, followed by the presentations of some selected young researches, and closed by a poster session where f all research groups participating at +FuzzyMAD.

+FuzzyMAD

In this +FuzzyMAD 2024 edition, our three senior invited speakers were:

- **José A. Olivas**, from the University of Castilla-La Mancha (Spain), who talked about "The role of Soft Computing in the European Commission's definition of A.I.: application to Social Networks observation."
- **Bibiana Granda**, from Complutense University of Madrid (Spain), who talked about "Decision support models for wildfire suppression."
- **Jorge Herrera**, from San Pablo University (Spain), who talked about "A functional objective in newspapers."

The selected group of young researchers invited to present their Ph.D. works were:

- **William F, Acero**: "Unification of basic models for small area estimation at unit level and area by means of calibration."
- **Carlos Giner**: "Multivariate target encoding applied within an insurance companies framework."
- **Juan M. Millán**: "Step-Stress Tests for Highly Reliable Devices."
- **Álvaro Carrasco**: "Multi-criteria assessment for electric vehicle selection: an AHP-based approach."
- **Carlos I. Pérez-Sechi**: **"**Extended explainability based upon SHAP."

Finally, according to our tradition, the poster session was organized around a buffet lunch, where attendants are encouraged to explore potential collaborations with colleagues, once those posters are designed precisely to show the research and projects being currently developed in each group, and provoke lightning discussions on how to design outstanding joint projects, find joint solutions to existing problems and face together innovative problems or inter disciplinary techniques.

+FuzzyMAD 2024 has been again possible thanks to the support of the Faculty of Mathematics at Complutense University of Madrid, the

+FuzzyMAD

Instituto de Matemática Interdisciplinar

Interdisciplinary Mathematics Institute (particularly its Data Science Club program), the Ph.D. Program on Mathematical Engineering, Statistics and Operational Research (IMEIO, a joint program of Complutense University and the Technical University of Madrid), and the Spanish research groups led by profs. **Tinguaro Rodríguez, Daniel Gómez and Begoña Vitoriano**, which together conform the FORaid team.

+FuzzyMAD 2024 was possible thanks also to the dedication of **Clara Arbizu, Sergio Barreno, Carlos Giner, Juan M. Millán, Alcides Nunda, Javier Sanz and William Acero**.

The +FuzzyMAD 2024 Scientific Committee,

Javier Montero, Pablo Flores, Daniel Gómez, and Tinguaro Rodríguez, plus, **M. Teresa Ortuño** as the UCM coordinator of the IMEIO Ph.D. Program, all from Complutense University of Madrid, Spain.

IMI-DSC Club

IMEIO Programa de Doctorado

FORAID

CONFERENCE REPORT

FLINS-ISKE 2024 conference

July 16-20, 2024
Faculty of Mathematics, Complutense University, Madrid, Spain
https://eventos.ucm.es/96182/detail/flins-iske-2024.html

Sponsored by:
Faculty of Mathematics, Complutense University of Madrid
Interdisciplinary Mathematics Institute, Complutense University of Madrid (IMI Data Science Club)
Statistics and Data Science Institute, Complutense University of Madrid
Thematic Network on Multicriteria Decision Making RED2022-134540-T, Spain (AEI)
Project PID2021-122905NB-C21, Spain (AEI)
Complutense University Grant AE-969077

The joint 16th FLINS *Conference on Computational Intelligence in Decision and Control* and 19th ISKE *Conference on Intelligence Systems and Knowledge Engineering* was successfully held in Madrid, Spain, July 16-20, 2024.

FLINS and ISKE conference series were founded by professor **Da Ruan** (1960-2011), and every four years they are jointly organized by a steering committee, now chaired by profesor **Etienne Kerre** (University of Ghent, Belgium).

FLINS is an acronym introduced in 1994 originally for *Fuzzy Logic and Intelligent Technologies in Nuclear Science*, later on extended into a well-established international research forum to advance the foundations and applications of computational intelligence for applied research in general, and for complex engineering and decision support systems in particular.

ISKE is an acronym for *Intelligent Systems and Knowledge Engineering*, launched in 2006 aiming to give researchers the opportunity to carry out future-oriented research in applied intelligent systems to real-world engineering problems.

This FLINS-ISKE 2024 joint conference counted with 121 participants from 12 countries and 108 papers, organized in 3 plenary sessions, 2 round tables and 21 parallel sessions plus 1 poster session. Submissions were allowed in two possible formats: either as *full papers* or as *only abstracts*.

Accepted full papers have been published within the books series *World Scientific Proceedings Series on Computer Engineering and Information Science* under the title "Intelligent Management of Data and Information in Decision Making", see https://www.worldscientific.com/worldscibooks/10.1142/13882#t=toc

Accepted *only abstracts*, were included in the "FLINS-ISKE 2024 Book of Abstracts" (ISBN 978-84-09-62251-1).

Associated to this joint conference, two special issues have been launched: one in the *International Journal of Computational Intelligence Systems* has been also launched, under the title "Artificial Intelligence in Industry, Knowledge Computing and Decision Making;" and another one in the journal *Advanced Materials & Sustainable Manufacturing*, under the title "AI-based Sustainable Smart Industrial Systems."

Conference welcome session was scheduled on Tuesday 16 July, and each work day started with an extremely attractive plenary talk.

The first plenary talk was given by **Pascale Zarate** (proposed by the Thematic Network on MCDM) from Toulouse Capitole University, France (coordinator of

the European working group on DSS for 20 years and current Vice President of the INFORMS GDN section). Her talk was devoted to "Decision Support: History and trends."

The second plenary talk was given by **Jie Lu**, from University of Technology Sydney, Australia (Director of the Australian Artificial Intelligence Institute at University of Technology Sydney and recipient of two IEEE Transactions on Fuzzy Systems Outstanding Paper Awards, among other international awards). Her talk was devoted to "Autonomous Machine Learning for Decision Support in Complex Environments."

The third plenary talk was given by **Dominik Slezak**, from University of Warsaw, Poland (past President of the International Rough Set Society and co-founder of several technological companies). His talk was on "Rough Set Approach to Scalable Similarity Measures - Machine Learning Applications."

Following the tradition of FLINS and ISKE conferences, all participants were encouraged to continue technical discussions in a more informal way and explore the possibility of joint projects after sessions, taking advantage of two coffee breaks during the day, and particularly during the lunch at the conference site.

Two suggestive round tables on hot issues were also organized after Thursday and Friday lunches.

The first round table was devoted to "Ethical Challenges in Artificial Intelligence", leading to a intense discussion between all round table participants: **Migle Laukyte** from Pompeu Fabra University, Spain (member of the *European Group on Ethics in Science and New Technologies* and a member of *Expert Group on Blockchain Ethics)*, **Gonzalo Génova** from Carlos III University, Spain (responsible

of the blog "Of machines and intention - Reflections on technology, science and society") and **Karina Gibert** from Polytechnic University of Catalonia, Spain (Head Director of Intelligent Data Science and Artificial Intelligence Research Center), chaired by **Luis Magdalena** (Polytechnic University of Madrid, Spain).

The title of the second round table "Bringing Artificial Intelligence to the Real World" addressed key issues on the expected future of research within Artificial Intelligence and its applications, with special attention to Fuzzy Sets and Soft Computing. In this session, round table participants were **Humberto Bustince** from Public University of Navarra, Spain (President of the International Fuzzy Systems Association, and winner of the National Computer Science Prize José García-Santesmases of Spain), **Xianyi Zeng** from University of Lille, France (holder of the Innovation R&D Award from France-China Committee in 2021 and coordinator of three European projects), **Alberto Bugarin** from University of Santiago de Compostela, Spain (Deputy Director of the University of Santiago de Compostela School of Engineering, member of the Board of Directors of the Spanish Association for Artificial Intelligence and secretary of the Spanish Society for Natural Language Processing), and **Sergio Damas** from University of Granada, Spain (past IFSA Application Award winner and Scientific Director of AI-Lab, AI Center of Excellence, a joint initiative of the UGR, Google and the Spanish Consultancy "Indra" to foster AI transfer), chaired by **Matilde Santos** (Complutense University of Madrid, Spain).

But we also have to acknowledge the great time all participants had on Friday at the gala dinner in one of the best flamenco dancing places in Madrid, and also during the Saturday visit to Segovia, an historical old town declared UNESCO World Heritage Site in 1985, with an amazing roman aqueduct, among other impressive monuments,

During the gala dinner several FLINS and ISKE awards were acknowledged:

- Da Ruan 2022 Award: **Jie Lu (**University of Technology Sydney, Australia).
- Da Ruan 2024 Award: **Javier Montero** (Complutense University of Madrid, Spain).
- FLINS 2024 Best Paper Award: **C. Franco de los Ríos, R. Sierra and J. Macías**, from European Commission (Italy) and University of the Andes (Colombia), for their paper "Detection of crops from satellite images for biomass fuzzy estimation."
- ISKE 2024 Best Paper Award: **Z. He, D. Hu, G. Chen, X. Zeng and K.P. Tran**, from South China University of Technology (China) and University of Lille (France), for their paper "Paper break fault recognition in long process papermaking process based on autoencoder."
- FLINS 2024 Best Student Paper Award: **J. Baz, I. Diaz and S. Montes**, from University of Oviedo (Spain), for the paper "Actualization probabilities of idempotent nullnorms and uninorms."
- ISKE 2024 Best Student Paper Award: **R. Yera, M. Barranco and L. Martinez**, from University of Jaen (Spain), for the paper "A Novel approach for measuring demographic parity fuzziness in group recommendation."
- FLINS 2024 Best Poster Award: **Carmen Torres-Blanc, Susana Cubillo, Jesús Martínez-Mateo, Luis Magdalena, F. J. Talavera and Jorge Elorza**, from Polytechnic University of Madrid (Spain) and Public University of Navarra (Spain), for their poster "Inclusion (or subsethood) in type-2 fuzzy sets."
- FLINS 2024 Best Poster Award: **D. Wang, P. Zhang, P. Deng and T. Li** from Chengdu University of Traditional Chinese Medicine (China), Xihua University (China) and Southwest Jiaotong University (China), for their paper "Temporal knowledge graph embedding for metro flow analysis."

Finally, we would like to express our gratitude to **Elena Gavilán, Juan Antonio Guevara, Inmaculada Gutiérrez, Eduardo Muñoz-Palomeque, Pablo Olaso, Karina Rojas and Ziwei Shu** for their work during the conference, and to **Yanhua Li and Alexis Vizcaino**, for their support at the conference Springer Nature booth.

The FLINS-ISKE 2024 local committee,

Javier Montero, Pablo Flores, Daniel Gómez, Luis Magdalena, Tinguaro Rodríguez and Matilde Santos.

Da Ruan's Awardees (Jie Lu and Javier Montero) with Etienne Kerre

CONFERENCE REPORT

18th +FuzzyMAD meeting

December 12, 2025
Faculty of Mathematics, Complutense University, Madrid, Spain
https://eventos.ucm.es/142029/detail/fuzzymadâĂŘ2025.html

Sponsored by:
Faculty of Mathematics, Complutense University of Madrid
Interdisciplinary Mathematics Institute, Complutense University of Madrid (IMI Data Science Club)
Ph.D. Program on Mathematical Engineering, Statistics and Operational Research (IMEIO)
Project PID2024-155289NB-I00 of the Government of Spain (FORAid)

+FuzzyMAD 2025 meeting was held in December 12, 2025, see https://eventos.ucm.es/142029/detail/fuzzymad-2025.html.

In this 18th edition of +FuzzyMAD we reached 87 participants, following our well stablished structure: a first part bringing passionate speakers to open the minds of our Ph.D. students, the second part allowing our young researchers to share their Ph.D. projects with senior colleagues, and in the third part, while having a long buffet lunch that pursues the interchange of ideas and possible future collaborations, each research group can present a poster showing their last activities and findings.

Once more, +FuzzyMAD stressed the relevance of developing a multidisciplinary research, inviting researchers to enjoy their work, where the open discussion of problems, approaches and solutions is a must. Scientific face-to face meetings are part of the life a scientist should live in order to be creative, and in order to address complex problems, which almost for sure require the coordination of specialists from different fields.

In this +FuzzyMAD 2025 edition, our three senior invited speakers were:

- **Juan Tejada**, from Complutense University of Madrid, who talked about "*Measuring interaction in social networks*".
- **María Jaenada**, from National University of Distance Education (UNED, Spain), who talked about "*Highly reliable products and misleading data: statistical robustness as a guarantee for reliability*."
- **Juan Carlos Losada**, from Polytechnic University of Madrid, who talked about "*Information diffusion and polarization in social networks*."

The selected group of young researchers invited to present their Ph.D. works during +FuzzyMAD 2025 were:

- **Dennys Mauricio Coronel Vallejo**: "*Algorithms for the Monitoring, Prediction, and Detection of Mechanical Anomalies and Energy Generation in Wind Farms*".
- **Ricardo Hidalgo**: "*The Path Toward a Comprehensible Scale of Code*".
- ***Andy Domínguez***: *"Topological and Geometric Indicators of Early Warning in Global Financial Networks*".
- **Miguel de Andrés Herrero**: "*A Computational Framework for Behavioral Metrics of Emotions Through Video Games*".
- **Rodrigo Hernández**: "*The Hidden Paths Problem: Improving Community Detection with Higher-Order Information*".
- **Carlos Giner**: "*Fuzzy WoE: A Soft Discretization Approach for Credit Risk Modeling*".

+FuzzyMAD 2025 has been possible thanks to the support of the Faculty of Mathematics at Complutense University of Madrid, the Interdisciplinary Mathematics Institute (particularly its Data Science Club program), the Ph.D. Program on Mathematical Engineering, Statistics and Operational Research (IMEIO, a joint program of Complutense University and the Technical University of Madrid), and the Spanish research groups led by profs. **Daniel Gómez, Tinguaro Rodríguez** and **Begoña Vitoriano**, which together conform the FORaid team.

We also want to express our gratitude to ***Carlos Giner, Clara Arbizu, Alba Lirón, Valentina Chiussi, Verónica Ruiz, Estrella García Pelluz, Juan Manuel Millán y Sergio Barreno***, who helped in the organization of this +FuzzyMAD 2025 meeting.

The +FuzzyMAD 2025 Scientific Committee,

Javier Montero, Tinguaro Rodríguez, Daniel Gómez and Pablo Flores, plus **M. Teresa Ortuño** as the UCM coordinator of the IMEIO Ph.D. Program.

CONFERENCE REPORT

ISFS 2025

Katowice, Poland, 23-25 May 2025
6th International Symposium on Fuzzy Sets

Attendees at ISFS 2025

The 6th International Symposium on Fuzzy Sets (ISFS 2025) was held on May 23-25, 2025, in Katowice, Poland, bringing together researchers working in the broad area of fuzzy sets, fuzzy logic, and computational intelligence. The event was organized by the Polish Society for Fuzzy Sets (POLFUZZ) in cooperation with the Faculty of Science and Technology, University of Silesia in Katowice, the Polish Mathematical Society (PTM), and the European Society for Fuzzy Logic and Technology (EUSFLAT), which served as co-organizers.

The main scientific program took place on May 23-24 at the spinPLACE – Centre for Creativity and Coworking (University of Silesia, Katowice), while May 25 was devoted to a social and cultural program, including a visit to the Castle Museum in Pszczyna.

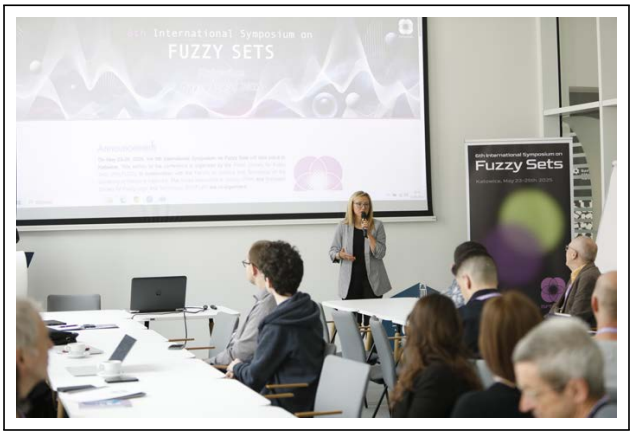
ISFS 2025 provided an international forum for presenting recent advances in the theory, methodology, and applications of fuzzy sets and systems, with an emphasis on interdisciplinary exchange and collaboration. Topics covered a wide spectrum, including foundational aspects of fuzzy logic, imprecise information modelling (also in relation to rough sets and other paradigms), intelligent data analysis and data mining, knowledge representation, decision-making models, expert systems, information retrieval, image processing and computer vision, approximate reasoning, as well as emerging themes such as federated learning.

A key component of ISFS 2025 was its plenary program. Plenary lectures were delivered by distinguished invited speakers, presenting both methodological innovations and broader perspectives on the development of fuzzy research.

The plenary lectures were given by:

1. Gabriella Casalino (University of Bari Aldo Moro, Italy) - “Explaining Evolving Data”, addressing challenges of real-time and streaming data analysis, semi-supervised

learning, and explainability in critical domains, with fuzzy logic as a natural tool for interpretable modelling



2. Lucian Coroianu (University of Oradea, Romania) - “Approximation methods in fuzzy analysis”, focusing on approximation problems for fuzzy numbers and aggregation operators, including non-linear operators and optimization-based approaches.

3. József Dombi (University of Szeged, Hungary) - “On the fuzzy concept”, offering a conceptual and operator-theoretic perspective on the development of fuzzy systems and continuous-valued logic.

4. Marek Reformat (University of Alberta, Canada) - “State Assessment in Complex Systems: An Evidence Theory Approach to Multi-granular Data Integration”, presenting a framework for hierarchical state assessment under uncertainty using evidence theory and granular state representations.

ISFS 2025 attracted participants representing a genuinely international research community, as reflected by the diversity of plenary affiliations (Italy, Romania, Hungary, Canada) and the involvement of international scientific bodies such as EUSFLAT.

In addition to the plenary lectures, the program featured standard conference presentations (20 minutes, including discussion), a gala dinner in Katowice, and a concluding trip to Pszczyna, all of which contributed to both scientific exchange and community building.

An additional highlight of the program was the announcement of the results of the first national competition for the best student thesis on fuzzy set theory and its applications. The first-place winner was Milena Zacharczuk from the Warsaw University of Technology, who received the award for her thesis entitled "Liu’s uncertainty theory in statistical reasoning with imprecise data."

Overall, ISFS 2025 confirmed the symposium series’ role as an active platform for presenting high-quality research results and strengthening collaboration within the fuzzy sets community, both in Poland and internationally.

NEWS

Foreword of the New Editor-in-Chief of IJUFKS

Jesús Medina Moreno

It is with great honor and a sense of responsibility that I write this foreword to announce my appointment as the new Editor-in-Chief of the International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, succeeding Professor Bernadette Bouchon-Meunier, who has led the journal with exceptional vision and great dedication.

First and foremost, I would like to express my deepest gratitude to Professor Bouchon-Meunier for her outstanding leadership and the exemplary work she has done over the years. Under her stewardship, the journal flourished, establishing itself as a premier journal in the fields of uncertainty, fuzziness, and knowledge-based systems. Her scholarly insight, unwavering commitment, and tireless efforts have been fundamental to the advancement of both the journal and the broader research community in general. It is truly a privilege to follow in her footsteps, and I am deeply thankful for her exemplary work, which has set a high standard for me to uphold.

As I step into this new role, I am excited to continue the journal's mission of publishing high-quality, impactful research that addresses the challenges and opportunities in the fields of mathematics, uncertainty, fuzziness, and knowledge-based systems. These areas are more relevant than ever, as the complexities of real-world problems demand innovative, flexible, and robust solutions. I look forward to fostering further growth, encouraging interdisciplinary collaborations, and supporting the community of researchers, practitioners, and educators who contribute to this vibrant field.

The road ahead is one of opportunity, and I am committed to ensuring that this journal remains at the forefront of science advancing in its scope. My goal is to maintain the high standards set by my predecessor and try to enhance them, if possible, bringing new alternative perspectives to the journal's editorial direction. Together with the distinguished editorial board, and the area editors, in particular, I aim to continue strengthening the journal's global reach, supporting innovative research, and providing a platform for new ideas that challenge existing paradigms.

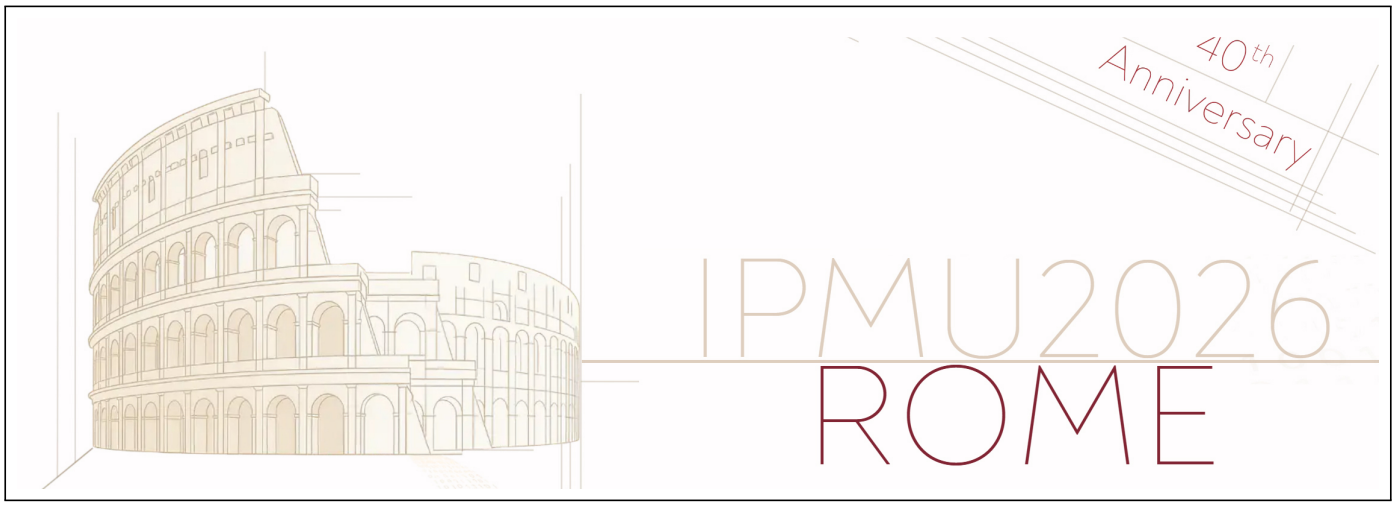
I would also like to take this opportunity to thank the journal's authors, area editors, reviewers, and readers for their ongoing support. Your engagement is vital to our shared success, and I look forward to collaborating with all of you as we move forward into this new phase.

Once again, I extend my sincere gratitude to Professor Bouchon-Meunier for her exemplary leadership and dedication. I am truly honored to have the opportunity to serve as the Editor-in-Chief, and I am excited about what we can achieve together in the coming years.

Jesús Medina
University of Cádiz, Spain

IPMU 2026

June 15th-19th, 2026, Rome, Italy
21st International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems
https://www.sbai.uniroma1.it/conferenze/ipmu2026/



The IPMU conference is organized every two years with the aim of bringing together scientists working on information processing and the management of the many aspects of uncertainty. It also serves as an ideal forum for the exchange of ideas between theoreticians and practitioners in these and related areas.

The 2026 edition of IPMU will take place at the Faculty of Economics of Sapienza University of Rome, Italy, in the nearby of the University city of Rome and the main train stations (Termini and Tiburtina). It celebrates the 40th anniversary from the first edition of the conference that took place in Paris, France. The choice of Rome for this special occasion is not a case since Rome and Paris are exclusively and reciprocally twinned, starting from April 1956.

Sapienza University of Rome is one of the oldest universities of the world, being it funded in 1303 by Pope Boniface VIII, and is the largest university in Europe. Due to its strategic position, the Faculty of Economics allows to easily reach the plethora of monuments, historic hot-spots and wonderful sightseeing places that awarded to Rome the name of the Eternal city. Get ready for discussing cutting-hedge research on methods for the management of uncertainty and aggregation in one of the most beautiful cities of the world.

On behalf of the Organizing Committee of the 21st IPMU Conference, we invite researchers to submit original research contributions (theoretical, methodological, applications) on a specific topic within the scope of the conference which includes (but is not limited to) the following topics:

- Theory, Methods and Tools:
  - Measures of Information and Uncertainty
  - Bayesian and Probabilistic Methods
  - Evidence, Possibility and Utility Theories
  - Imprecise Probabilities
  - Fuzzy, Rough, Intuitionistic, etc, Sets and operators
  - Fuzzy Logic and other non-classical Logics
  - Multiple Criteria Decision Methods
  - Aggregation Methods
  - Knowledge Acquisition, Representation and Reasoning
  - Graphical Models
  - Machine Learning
  - Evolutionary Computation
  - Neural Networks
  - Data Analysis and Data Science.

Application Fields:

- Big Data
- Smart Cities
- Image Processing
- Intelligent Systems and Information
- Processing, Logistics, Transportation and Routing
- Information Retrieval and Fusion

- Agents
- E-Health, Medicine and Bioinformatics
- Finance
- Fuzzy Optimization

SUBMISSION INSTRUCTIONS

The proceedings of IPMU 2026 regular papers will be published by Springer in the series Communications in Computer and Information Science (https://link.springer.com/series/7899), indexed in DBLP, Google Scholar, EI-Compendex, Mathematical Reviews, SCImago, Scopus. CCIS volumes are also submitted for the inclusion in ISI Proceedings.

- Deadline for regular paper submission: 12 January 2026.
- Authors should consult Springer's authors' instructions and use the proceedings template, either for LaTeX or for Word, for the preparation of their papers. The LaTeX templates are also available in Overleaf. Springer encourages authors to include their ORCIDs in their papers.
- The length of a submission is 12-14 pages in the LNCS/CCIS one-column page format. The paper must be written in English and submitted in PDF via the EasyChair system, at the following link: https://easychair.org/my/conference?conf=ipmu2026
- In EasyChair authors can choose one of the proposed special sessions or the general track of IPMU 2026.
- In EasyChair authors should point out if one of the authors is an early career researcher (no more than 4 years from the Ph.D. defense) to be considered for best early career researcher awards.
- All figures are printed in black and white, unless a special arrangement has been made for colored figures. Colored figures remain in color in the online version. Please make sure that any colored figures are equally comprehensible in black and white. Figures and Tables should be cross referred in the text.
- Authors interested in publishing their paper Open Access should consult Springer's page.
- One full registration will allow acceptance of one regular paper. Each additional accepted paper associated with the same registration will be subject to an additional fee.

Short Papers

IPMU will also accept short papers of 2-6 pages. Accepted short papers will not be published by Springer. A separate volume, with its own DOI, containing the accepted works, will be published in open access. Authors may opt to not include their work in this volume.

- Deadline for short paper submission: 12 January 2026.
- Short papers should be prepared using the LaTeX template used for regular papers that are available on Overleaf.
- Short papers must be written in English and submitted in PDF via the EasyChair system, at the following link: https://easychair.org/my/conference?conf=ipmu2026
- Short papers can be submitted to one of the proposed special sessions or the general track of IPMU2026.
- In EasyChair authors should take care to select the checkbox marking the submission as a short paper.
- Short papers will be included in the regular conference program and Book of Abstracts and will be presented orally.
- One full registration will allow acceptance of one short paper. Each additional accepted paper associated with the same registration will be subject to an additional fee.

GRANTS AND AWARDS

The EUSFLAT Board is covering 5 student grants, that will cover the early student registration fee. Detailed information can be found at
https://www.sbai.uniroma1.it/conferenze/ipmu2026/student-grants.php

In addition, there shall be a number of awards for the best paper and best student paper at the conference. Information about these grants shall provided at the conference website in due course.

IMPORTANT DATES

- Paper submission deadline: January 12, 2026
- Notification of acceptance: February 15, 2026
- Camera-ready versions: March 1, 2026
- Conference: June 15-19, 2026

Contact:
ipmu2026@sbai.uniroma1.it

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Bernadette Bouchon-Meunier (France) and Ronald R. Yager (USA)

SFLA 2026

From 6 to 10 July 2026, Warsaw, Poland
EUSFLAT VII European Summer School on Fuzzy Logic and Applications

Faculty of Mathematics and Information Science (MiNI) of the Warsaw University of Technology.

The EUSFLAT Summer School series began in 2015, with its inaugural edition hosted by Università di Milano-Bicocca. Since then, the SFLA has traveled across Europe, being held in Ostrava (2016), Santiago de Compostela (2017), Bari (2018), Toledo (2024), and most recently, Riga.

The 2026 edition will be organized at the Faculty of Mathematics and Computer Science of the Warsaw University of Technology, under the auspices of the Polish Society for Fuzzy Sets (POLFUZZ).

This one-week intensive course will focus on the following topics:

- Fundamental concepts of fuzzy logic
- Uncertainty modeling
- Fuzzy clustering
- Statistics with imprecise data
- Rule-based reasoning.

Each day, participants - primarily PhD students and early-career researchers - will attend a lecture delivered by a distinguished guest speaker, followed by hands-on practical sessions and workshops. These activities are designed to introduce participants to current advances in fuzzy set theory and its applications, while fostering teamwork and the development of collaborative research projects.

A defining feature of the SFLA is its strong emphasis on interaction and collaboration between students and lecturers. Ample time is dedicated to discussion of challenging concepts, as well as to social and sporting activities that encourage informal exchange and networking.

Save the date: **6 - 10 July 2026**

To support participation, EUSFLAT will offer some grants for selected students. Further details will be announced on the official webpage:

https://eusflat.org/summer-school-2026/

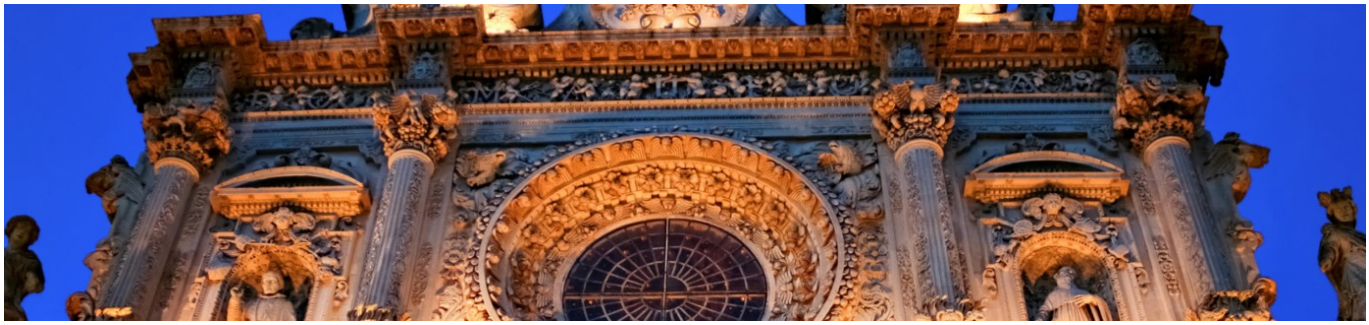
All those interested in SFLA 2026 are warmly encouraged to regularly check the official Summer School webpage for the latest updates on the scientific program, invited speakers, application procedures, and related information.

Beyond the academic program, Warsaw offers a vibrant and welcoming setting for the SFLA 2026. A dynamic European capital with a rich history, lively cultural scene, and green urban spaces, the city provides an excellent environment for learning, networking, and social interaction. We invite you to join us in Warsaw for an inspiring week of scientific exchange, collaboration, and discovery in the heart of Poland.

Przemysław Grzegorzewski &
Katarzyna Kaczmarek-Majer

SMPS 2026

From 15 to 18 September 2026
Lecce, Italy



Soft Methods in Probability and Statistics (SMPS 2026)

The **12th International Conference on Soft Methods in Probability and Statistics (SMPS 2026)** will be held on **September 15–18, 2026**, in the baroque city of **Lecce**, located in the picturesque Salento region of southern Italy.

SMPS is a biennial international conference that brings together researchers and practitioners interested in both established and emerging soft approaches to probability and statistics. Since its first edition in Warsaw in 2002, the conference has developed into a well-recognized forum for the exchange of ideas and the discussion of new trends that extend traditional frameworks in probabilistic, statistical, and uncertainty modeling. Particular emphasis is placed on flexible and nuanced methods for handling incomplete, imprecise, or subjective information.

Confirmed Plenary Speakers:

- **Bernard De Baets** (Ghent University),
- **Irene Gijbels** (KU Leuven),
- **Beatriz Sinova Fernández** (University of Oviedo).

In line with the tradition of the SMPS conference series, all participants presenting a talk are invited to submit a short paper (6–8 pages). Submissions will undergo a rapid peer-review process and should either present original research results or provide a concise survey of recently established developments. All accepted papers will be published in a forthcoming Springer conference proceedings volume.

Important Dates:

- **March 1, 2026** – Paper submission deadline,
- **April 26, 2026** – Notification of acceptance.

For further details, please visit the official conference website:

https://conference.unisalento.it/event/14/page/107-welcome

Przemysław Grzegorzewski and Fabrizio Durante
(General Chair)