Pioneer Award.

Meritorious Award.

The accepted papers represented a view of the latest advances in the area and anticipated the next steps in our commitment on mimicking nature to solve real practical problems. Some of these papers were grouped in 46 advanced special sessions and the rest formed the regular sessions. 318 of these works were orally presented and 40 were presented by means of posters. The attendance to the sessions was remarkably high, almost filling the rooms at all times.

The keynote talks given at the conference by Sangamitra Bandyopadhyay, Rainer Storn, Kenneth V. Price and Qingfu Zhang also deserve special attention. They covered topics as relevant for the community as multi-objective optimization, clustering and differential evolution. They were particularly motivating, making the audience ask many interesting questions.

From the social point of view the conference featured a number of activities. Particular mention goes to the reception for students, women and young professionals which grouped together over 100 people and allowed young people to interact with senior people in the field. The conference reception took place in Miramar Palace with a perfect view of San Sebastian bay. The reception started with a typical Basque dance called aurresku and was enlivened by a jazz quartet. Finally, a special mention must be made to the award banquet in the famous custom designer museum Balenciaga. During the dinner, several awards such as the evolutionary computation pioneer award were entered.

Finally we would like to thank the city of San Sebastian who strongly supported the conference by helping with its organization. To conclude, we gratefully acknowledge the support of IEEE Computational Intelligence Society for the conference.

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Conference Report on 2017 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2017)

For the first time in its long and prestigious history, the IEEE International Conference on Fuzzy Systems (FUZZ-IEEE) has been held in Italy and, precisely, in the magnificent scenario of Naples, one the most vibrant and fuzzy cities of the world. The integration between the Mediterranean nature of the geographic location and the quality of new research topics introduced and discussed at the conference made FUZZ-IEEE 2017 a unique event where participants have found an important cultural humus and a challenging environment capable of stimulating the development and discussion of new ideas and forms of collaboration. As a result of this synergic approach,

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FUZZ-IEEE 2017 confirmed its top-leading nature in the area of scientific events regarding the theory and applications of fuzzy logic.

The 2017 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2017) was held from 9 to 12 July in Naples, Italy. With an excellent congress facilities situated on Naples waterfront, one of the most active and efficient airports situated in the south of Europe, with its art and culture, with its scientific and technological accomplishments, with the beauties of its historic centre and the wonderful landscapes of its surroundings, along with the ancient Neapolitan culinary art and a mild climate, Naples is one of the most appropriate cities for hosting FUZZ-IEEE 2017.

FUZZ-IEEE 2017 featured invited talks by distinguished scientists, research papers, tutorials, panels and a competition. While FUZZ-IEEE 2017 included excellent technical and social programs, an industrial track and a doctoral colloquium were also held during FUZZ-IEEE 2017 for the first time. As always, the conference was financially sponsored by the Institute of Electrical and Electronics Engineers (IEEE) and the IEEE Computational Intelligence Society (CIS). Moreover, the conference was technically sponsored by European Society for Fuzzy Logic and Technology and sponsored by the University of Naples Federico II, the Department of Physics "Ettore Pancini" of the University of Naples Federico II, and the British Telecom (BT).

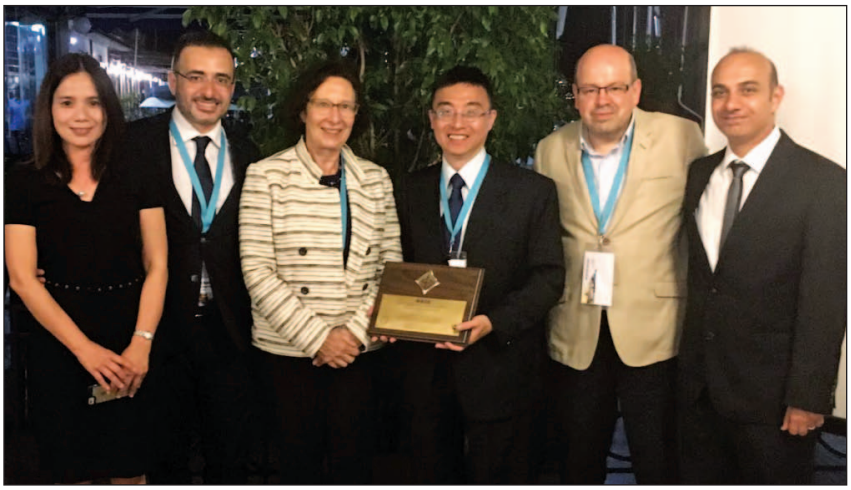
FUZZ-IEEE 2017 had a very high-level and extensive scientific program consisting of:

- Four invited tutorials (each of three hours duration) and two tutorials (each of two hours duration).
- Six plenary talks by Chin-Teng Lin (*Computational Intelligence for Brain Computer Interface*), Oscar Cordón (*Using Computational Intelligence to automate Craniofacial Superimposition for Skeleton-based Human Identification*), Jonathan Garibaldi (*Type-2 Beyond the Centroid*), Derek Anderson (*Fusion here, there and almost everywhere in computer vision—driving new advances in fuzzy integral*), Gabriella Pasi (*The role of aggregation guided by fuzzy quantifiers in Information Retrieval and in Social Media Analytics*) and Kimon Valavanis (*Navigation and Control of Unmanned Vehicles: A Fuzzy Logic Perspective*).
- Three panel sessions: *Brain Machine Interface*, *Future of Fuzzy Sets*, and *Industrial Panel*.
- Seventy parallel sessions covering a wide variety of topics, including special sessions.
- An industrial track with three talks about fuzzy logic in industry, two industrial-oriented special sessions, and an industrial panel session.
- A competition about the FML-based machine learning for human prediction and application on game of Go.
- A doctoral colloquium that, for the first time, gave an opportunity for Ph.D. students to discuss their research interests and career objectives with established researchers in theory and application of Fuzzy Logic.
- The Italian Fuzzy Pioneer Awards, an acknowledgment for Italian scientists who first used fuzzy sets and fuzzy logic in their research. These awards have been supported by EUSFLAT.

A total of 617 papers were submitted of which 65% were accepted for oral presentations. There was no poster session in FUZZ-IEEE 2017. All papers have been reviewed by at least three (3) reviewers, with no specific treatment given to papers submitted for special

A picture from the banquet in the Zi Teresa Restaurant.

The venue for FUZZ-IEEE 2017.



Prof. Chin-Teng Lin receives the Fuzzy Systems Pioneer Award during the banquet. From right: Hani Hagras (FUZZ-IEEE 2017 Program Chair), Francisco Herrera (FUZZ-IEEE 2017 Program co-Chair), Chin-Teng Lin, Bernadette Bouchon-Meunier (IEEE CIS Vice-President for Conferences), Giovanni Acampora (FUZZ-IEEE 2017 General Chair) and Chin-Teng Lin's wife.

sessions. All decisions have been taken by the Program Chairs in cooperation with the Area and Special Session Chairs. Papers submitted by the Program, Area, and Special Session Chairs were handled as conflict-of-interest papers, ensuring the anonymity of the reviewers. All the papers were also checked for plagiarism by using the IEEE CrossCheck system (powered by iThenticate APIs) and those exhibited high levels of (self-) plagiarism were excluded from the program.

The main streams of research appeared to be focused on fuzzy logic control, type-2 fuzzy logic, fuzzy decision making, fuzzy data science and fuzzy logic for Big Data, fuzzy computer vision and pattern recognition, fuzzy Natural Language Processing, theoretical aspects and applications of aggregation functions and software for soft computing. The balance between theoretical research and applications was well balanced in the whole program with a strong presence from industry. Special sessions on *Fuzzy Methods and Data Mining: data pre-processing, machine learning and their applications* and *Engineering Applications of Fuzzy Sets* attracted many contributions. These facts reflect the current interests for theoretical and methodological solutions using fuzzy sets theory to deal with uncertainty in different and significant application domains. It was remarkable to note that more than a quarter of all submissions were from student authors. Undoubtedly these figures are very encouraging demonstrating that an enthusiastic new generation of researchers is ready to pursue further advancements in fuzzy systems.

The organization of an international conference of large magnitude and significance demands tremendous effort and dedication and FUZZ-IEEE 2017 is no exception. From here, we would like to thank the area and special session chairs and all the conference chairs. Their support, in various forms, has resulted in a sound technical program. Of course, the reviewers' timely return of their reports was essential for the success of the conference and is greatly appreciated. Despite the extension to the paper submission deadline, notification of acceptance was made as planned. This has given authors time to consider reviewers comments and revise their work accordingly. We would also like to express our sincere gratitude to all the members of the organizing committee for sharing with us the joy as well as the occasional frustrations. They have shown great enthusiasm and professionalism in preparing the detailed arrangements for this conference. Finally, we would also like to extend our thanks to the authors for submitting very high-level quality research results and presenting them.

The conference had a number of social activities including Opening Ceremony, IEEE CIS Joint Reception for Students, Young Professionals and Women in Computational Intelligence, Welcome Reception, Coffee Breaks, Lunches in beautiful restaurants on Naples's waterfront, and a Banquet in a typical Neapolitan seafood restaurant. As a part of the banquet, Prof. Chin-Teng Lin received the 2017 Fuzzy Systems Pioneer Award. Moreover, an excellent entertainment program introduced the Neapolitan traditions and cultures to attendees. Precisely, singers and dancers accompanied the course of the whole gala dinner with songs and dances of Neapolitan cultures and traditions. During the Opening Ceremony, the Italian Fuzzy Pioneer Awards were delivered by Prof. Gabriella Pasi, President of EUSFLAT, to the valuable recipients: Prof. Antonio Di Nola, Prof. Mario Fedrizzi, Prof. Giangiacomo Gerla, Prof. Salvatore Sessa, Prof. Settimo Termini and Prof. Aldo Ventre.

Finally, we are confident that the participants had a great time during these four days and had many interesting and fruitful discussions with our fellow fuzzy systems researchers. Moreover, we are sure that choosing Naples as an Italian venue to host the conference has stimulated the networking activities also thanks to the exceptional climate and the wonderful scenario where all the congressional activities were held. To conclude, we gratefully acknowledge that the IEEE Computational Intelligence Society had played a very active and crucial role in the organization of the conference.