IFSA-EUSFLAT 2015
Organized by the European Centre for Soft Computing
http://www.softcomputing.es/ifsa-eusflat2015/
June 30th – July 3rd, Gijón, Asturias (Spain)

Special Session proposal
„Image Processing with Fuzzy Techniques"

Image Processing is among rapidly growing technologies today, with applications in various aspects of a human life. Image Processing became a core research area within engineering and computer science disciplines. It is focused on improving a quality of raw data from imaging sensors, getting over visible flaws and restoring originality of information. We believe that with increasing sophistication and power of the modern computing, computation will go beyond conventional, Von Neumann sequential architecture and would contemplate the optical execution too.

The Special Session will be focused on theoretical and application aspects of image processing in general and advantage of fuzzy (soft computing) techniques in this field in particular. Hybrid techniques that combine conventional and modern approaches are welcome. The following is a list of main topics:

Image resizing: upscaling and downscaling
Image fusion
Image reconstruction and inpainting
Image compression
Edge detection
Registration
Segmentation

With applications to

Medical imaging
Computer vision
Image processing on wearable devices

Deadlines:

Submission of papers to IFSA-EUSFLAT 2015 – January 16, 2015

ORGANIZERS:

Professor Irina Perfilieva, PhD, *irina.perfilieva@osu.cz*
Professor Javier Montero, Ph.D., *monty@mat.ucm.es*
Professor Etienne Kerre, Ph.D., *etienne.kerre@ugent.be*

Short Biographies

Professor Irina Perfilieva, PhD

At present, she is a full professor of Applied Mathematics in the University of Ostrava, Czech Republic. At the same time she is a head of Theoretical Research Department in the University of Ostrava, Institute for Research and Applications of Fuzzy Modeling.

She is the author and co-author of four books on mathematical principles of fuzzy sets and fuzzy logic, the co-editor of one book and many special issues of scientific journals. She has published over 250 papers in the area of multi-valued logic, fuzzy logic, fuzzy approximation and fuzzy relation equations. She is a member of editorial boards of the following journals: Fuzzy Sets and Systems, Transactions on Fuzzy Systems, International Journal of Computational Intelligence Systems, Iranian Journal of Fuzzy Systems, Journal of Uncertain Systems, Journal of Intelligent Technologies and Applied Statistics.

She works as a member of Program Committees of the most prestigious International Conferences and Congresses in the area of fuzzy and knowledge-based systems.

For her long-term scientific achievements she was awarded on the International FLINS 2010 Conference on Foundations and Applications of Computational Intelligence. She received the first memorial Da Ruan award at FLINS 2012. In 2013, she was elected as an EUSFLAT Honorary Member.

Professor Javier Montero, Ph.D.

is Full Professor at the Department of Statistics and Operational Research, Faculty of Mathematics, Complutense University of Madrid (Spain). He holds a Ph.D. in Mathematics from Complutense University since 1982 and has been leading research projects since 1987.

He is author of more than 100 research papers in refereed journals such as Approximate Reasoning, Computational Intelligent Systems, Computer and Operational Research, European Journal of Operational Research, Fuzzy Sets and Systems, General Systems, Human and Ecological Risk Assesment, IEEE Transactions on Neural Nerworks, IEEE Transactions on Systems, Man and Cybernetics, IEEE Transactions on Industrial Informatics, Information Sciences, Intelligent Systems, Journal of Algorithms, Knowledge Based Systems, Kybernetes, Kybernetika, Mathware, Multiple Valued Logic, New Mathematics and Natural Computation, Non Linear Analysis, Omega, OR Spectrum, Pure and Applied Geophysics, Remote Sensing, Soft Computing, Top, and Uncertainty, Fuzziness and Knwledge-Based Systems, plus a similar number of refereed papers as book chapters.

His research interests are in Aggregation Operators, Preference Representation, Multicriteria Decision Aid, Group Decision Making, System Reliability Theory, Image Processing and Classification problems, mainly viewed as application of Fuzzy Sets Theory.

He has been the President of the European Association for Fuzzy Logic and Technology (EUSFLAT), Vice-President of the International Fuzzy Systems Association (IFSA), with 18 years in different academic management positions at his University (including Dean at the Faculty of Mathematics and Vice-Rector).

Professor Etienne Kerre, Ph.D.

He obtained his M.Sc. degree in Mathematics in 1967 and his Ph.D. in Mathematics in 1970 from Ghent University. Since 1984, he has been a lector, and since 1991, a full professor at Ghent University.

In 1976, he founded the Fuzziness and Uncertainty Modeling Research Unit (FUM) and since then his research has been focused on the modeling of fuzziness and uncertainty, and has resulted in a great number of contributions in fuzzy set theory and its various generalizations. Especially the theories of fuzzy relational calculus and of fuzzy mathematical structures owe a very great deal of him. Over the years he has also been a promotor of 29 Ph.D's on fuzzy set theory.

His current research interests include fuzzy and intuitionistic fuzzy relations, fuzzy topology, and fuzzy image processing. He has authored or co-authored 25 books, and more than 450 papers appeared in international refereed journals and proceedings.