



**Strengthening Teaching Competences
in Higher Education
in Natural and Mathematical Sciences**

Co-funded by the
Erasmus+ Programme
of the European Union



**Engagement of teachers from enterprises
and teachers from abroad in MSc of the
Department of computer science,
Faculty of sciences and mathematics, UNI**

November 2021



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Master study programs, Department of computer science, Faculty of sciences and mathematics, UNI

A translation of the text written in Standard 6 of the documents for the accreditation of study programs of the Department of Computer Science is listed below.

“A numerous of subjects in this study program belong to the border area between computer science and educational sciences. Those courses were created within the framework of the Erasmus+ project "Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences - TeComp", whose main goal is to improve the quality of higher education in the field of natural and mathematical sciences through greater integration of modern pedagogical approaches, methodologies and technologies in teaching and learning. Experts from partner universities from the European Union - Ghent, Oviedo, Granada, Ostrava and Banska Bistrica - invested their rich experience in creating these subjects. The state of our higher education, especially at this moment, fully justifies the need for such courses. However, the foreign study programs with which our study programs were compared have a general orientation towards computer sciences and do not contain subjects from the field of electronic and online learning.”

In order to improve the quality of teaching and achieve comparability and competitiveness with the European higher education scene, project consortium members Irina Perfilieva (UO) and Irene Diaz (UNIOVI), as well as many stakeholders from Serbian enterprises are engaged as lecturers from abroad for certain course contents at the Department of Computer science, Faculty of sciences and mathematics, UNI

moderator

prof. dr Jelena Ignjatović

DECLARATION OF INTENT

I declare that I agree to carry out a part of teaching at the study program of master academic studies „Machine Learning“ whose holder is the Faculty of Natural Sciences and Mathematics of the University of Niš.

I am particularly interested in teaching a part of the course „Fuzzy systems“.

Ostrava, 16.09.2020



Dr Irina Perfilieva, Full Professor
University of Ostrava
Institute for Research and
Applications of Fuzzy Modeling

Curriculum Vitae

Name: Irina Perfilieva, M.Sc., Ph.D., Professor

Employer: University of Ostrava

Institute for Research and Applications of Fuzzy Modeling

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e-mail: Irina.Perfilieva@osu.cz

Education:

MSc in Applied Mathematics in the Moscow State University, Department of Computer Mathematics and Cybernetics.

Degrees:

Degree of Candidate of Physical and Mathematical Sciences (PhD) in the Moscow State University. Theme of the doctoral thesis: “Functional Completeness in Many-Valued Logics”.

Habilitation: Degree of Docent in the Czech Technical University in Prague. Theme of the thesis: “The Theory of Representation of Functions by Fuzzy Logic Formulas”.

Full Professorship: Theme of Professor Lecture: “Fuzzy Approximation”, defended in the Czech Technical University in Prague and awarded by the President of the Czech Republic.

Honorary Degrees:

- In 2017, she was awarded a title of Professor Honoris Causa in Amity Institute of Information Technology, Amity University Uttar Pradesh, Noida, India.
- In 2019, she was awarded a title of Doctor Honoris Causa in the University of Latvia, Riga, Latvia.

Course of employment:

1982–1998: Moscow State Academy of Instrument-Making and Informatics, Assistant, Associate Professor, Professor,

1995–1998: Moscow State University Associate Professor,

1999–2001: University of Ostrava, Institute for Research and Applications of Fuzzy Modeling, Senior Scientist, Associate Professor,

1999–2001: University of Ostrava, Department of Mathematics, Associate Professor,

2001–: University of Ostrava, Institute for Research and Applications of Fuzzy Modeling, NCS IT4Innovations, Professor, Senior Scientist, Head of the Department of Theoretic Research.

Research Activities:

- fuzzy approximation and fuzzy topological spaces;
- fuzzy transforms, image processing, mathematical morphology;
- fuzzy differential equations;
- fuzzy logic, approximate reasoning;
- systems of relation equations and their solvability.

Awards:

For her long-term scientific achievements she was awarded on the International FLINS 2010. She received the memorial Da Ruan award in 2012. Since 2013, she is an EUSFLAT Honorary Member, and since 2019 she is an IFSA Fellow.

She is an **Member of the Advisory Board** of the journals

- Int. Journal of Computational Intelligence Systems,
- Journal of Fuzzy Logic and Modeling in Engineering

and an **Editorial Board member** of the journals

- Transactions on Fuzzy Systems (IEEE CIS),
- Int. Journal of Fuzzy Sets and Systems,
- Int. Journal of Soft Computing (area editor),
- Iranian Journal of Fuzzy Systems,
- Int. Journal of Fuzzy Information and Engineering.

Prof. Perfilieva has published over 270 scientific papers, two patents in the area of time series processing and the Internet service technique, project reports and theses. Her Scopus H-index is 28.

She has published the following **Books and the edited volumes:**

- Perfilieva I.: *Fuzzy Set Theory and Applications*. Itogi Nauki i Techniki 29 (1990), 83-151. (In Russian)
- Novák, V., I. Perfilieva (eds.): *Discovering the World With Fuzzy Logic*. Springer-Verlag, Heidelberg 2000, (Studies in Fuzziness and Soft Computing, Vol. 57) ISBN 3-7908-1330-3.
- Novák, V., Perfilieva I. and J. Močkoř: *Mathematical Principles of Fuzzy Logic*. Kluwer, Boston/Dordrecht 1999.
- Novák, V., Perfilieva I. and J. Močkoř: *Matematicheskie Principy Nechetkoj Logiki*, Moskva, Nauka 2006, in Russian.
- N. G. Jarushkina, T. V. Afanas'eva, I. G. Perfilieva, *Intellektual'nyj analiz vremennyh rjadov*, Moskva, Forum, 2012, in Russian.
- T. V. Afanas'eva, A.M. Namestnikov, I. G. Perfil'eva, A. A. Romanov, N. G. Jarushkina, *Prognozirvanie vremennyh rjadov. Nechetkie modeli*, Ulyanovsk, ULGTU, 2014, in Russian.
- Novák, V., Perfilieva, I. and Dvořák, A.: *Insight into Fuzzy Modeling*. J. Wiley & Sons 2016.
- J. Medina, M. Ojeda-Aciego, J. Verdegay, I. Perfilieva, B. Bouchon-Meunier, R. Yager (Eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems*, 17th International Conference, IPMU 2018,

- Perfilieva, I., Holčapek, M., Kreinovich, V. A New Reconstruction from the F-Transform Components. *Fuzzy Sets and Systems*. 2016, 288, 3-25. ISSN 1063-6706.
- Perfilieva, I., Daňková, M., Bede, B. Towards a higher degree F-transform. *Fuzzy Sets and Systems* 2011, 180, 3-19. ISSN 1063-6706.
- Perfilieva, I. Finitary Solvability Conditions for Systems of Fuzzy Relation Equations. *Inform. Sciences*. 2013, 29-43. ISSN 0020-0255.
- Perfilieva, I., Hodáková, P., Hurtk, P. Differentiation by the F-transform and Application to Edge Detection. *Fuzzy Sets and Systems*. 2016, 288, 96-114.
- Novák, V., Perfilieva, I., Holčapek, M. and V. Kreinovich. Filtering out high frequencies in time series using F-transform. *Information Sciences*, 274(2014), 192-209.
- Di Martino, F., Hurtk, P., Perfilieva, I. and S. Sessa. A Colour Image Reduction Based on Fuzzy Transforms. *Information Sciences*. 2014, 266, 101-111.
- D. Paternain, M. J. Campion, R. Mesiar, I. Perfilieva, H. Bustince, Internal Fusion Functions. *IEEE Trans. Fuzzy Systems* 26(2) (2018) 487-503.
- M. Zeinali, R. Alikhani, S. Shahmorad, F. Bahrami, I. Perfilieva, On the structural properties of Fm-transform with applications, *Fuzzy Sets and Systems* 342, (2018) 32-52.
- Nicolas Madrid, Manuel Ojeda-Aciego, Jesus Medina, Irina Perfilieva, L-fuzzy relational mathematical morphology based on adjoint triples, *Information Sciences*, 474 (2018) 75 – 89.
- Perfilieva, I., Vlasanek P., Total Variation with Nonlocal FT-Laplacian for Patch-based Inpainting, *Soft Computing*, 23, 2019, 1833-1842.
- Nguyen, L. T., Perfiljeva, I. and Holapek, M., Boundary Value Problem: Weak Solutions Induced by Fuzzy Partitions. *Discrete And Continuous Dynamical Systems B*, 25(2) (2020) 715-732.
- Perfiljeva, I. and P. Hurtk, The F-transform preprocessing for JPEG strong compression of high-resolution images. *Information Sciences*, 550 (2021) 221-228.
- K. A. Zakeri, S. Ziari, M. A. F. Araghi and I. Perfilieva, Efficient Numerical Solution to a Bivariate Nonlinear Fuzzy Fredholm Integral Equation, *IEEE Transactions on Fuzzy Systems*, 29/2 (2021) 442-454.



Universidad de Oviedo

Curriculum Vitæ

S. Irene Díaz Rodríguez



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Curriculum Vitæ

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1. Personal Data

Surname and Name: Díaz Rodríguez, Susana Irene

ID 09408378k. **Válido to:** 02/03/2021

Date and place of birth: 03/02/1973, Oviedo, Asturias

Postal address Asturias, Llanera, Guyame 46, 649450253

e-mail: sirene@uniovi.es

Current Position: Full Porfessor

Departament : Computing

Knowledge Area: Artificial Intelligence

1.1 Professional Preparation

- Bachelor in Mathematics. University of Oviedo (Spain), 1995.
- PhD in Computer Science. University Carlos III of Madrid, 2001.

1.2 Appointments

- Full Professor (since 31/07/2019). Computer Science and Artificial Intelligence, Department of Computing, University of Oviedo/ Spain
- Senior Lecturer (from 22/03/2008 to 30/07/2019). Computer Science and Artificial Intelligence, Department of Computing, University of Oviedo/ Spain
- Lecturer (from 01/05/2001 to 21/03/2008). Computer Science and Artificial Intelligence, Department of Computing, University of Oviedo/ Spain
- Tutor (from 01/12/1999 to 01/05/2001). Computer Science and Artificial Intelligence, Department of Computing, University of Oviedo/ Spain
- Tutor (from 01/11/1997 to 01/12/1999). Department of Computing, University Carlos III of Madrid/ Spain



2. Publications

2.1 Publicaciones indexadas en Science Citation Index

- **Authors:** Ángel Riesgo, Pedro Alonso, Irene Díaz, Susana Montes.
Title: General definitions for the union and intersection of ordered fuzzy multisets,
Name: Iranian Journal of Fuzzy Systems
Number: 17(4)
Pages: 557-564
Date: 2020
Editorial: 41-54
ISSN: 1735-0654
- **Authors:** Agustina Bouchet, Susana Montes, Virginia L. Ballarin, Irene Díaz.
Title: Intuitionistic fuzzy set and fuzzy mathematical morphology applied to color leukocytes segmentation,
Name: Signal, Image and Video Processing
Number: 14(3)
Pages: 557-564
Date: 2020
Editorial: SPRINGER
ISSN: 1863-1703
- **Authors:** Irene Díaz, Yusuke Nojima.
Title: Fuzzy sets for decision making in emerging domains
Name: Fuzzy Sets and Systems
Number: 395
Pages: 197-198
Date: 2020
Editorial: Elsevier Science BV
ISSN: 0165-0114
- **Authors:** Humberto Bustince, A. Kolesarova, Gracaliz Dimuro, Irene Díaz, Javier Fernández, Radko Mesiar, Susana Montes.

- Title:** On some classes of directionally monotone functions
Name: Fuzzy Sets and Systems
Number: 386
Pages: 161-178
Date: 2020
Editorial: Elsevier Science BV
ISSN: 0165-0114
- **Authors:** Elena Díaz, Irene Díaz, Cecilia del Busto, Dolores Escudero, Silvia Pérez.
Title: Clock Genes Disruption in the Intensive Care Unit
Name: Journal of Intensive Care Medicine
Date: 2019
Editorial: SAGE
ISSN: 0885-0666
 - **Authors:** Ángel Riesgo, Pedro Alonso, Irene Díaz, Susana Montes.
Title: An algorithmic approach for computing unions and intersections between fuzzy multisets
Name: International Journal of Computational Intelligence Systems
Date: 2019
Editorial: Public Library Science
ISSN: 1875-6891
 - **Authors:** Luis J. Rodríguez-Muñiz, Ana B. Bernardo, María Esteban, Irene Díaz.
Title: Dropout and transfer paths: what are the risky profiles when analyzing university persistence with machine learning techniques?
Name: PloS one
Number: 14(6)
Pages: <https://doi.org/10.1371/journal.pone.0218796>
Date: 2019
Editorial: Public Library Science
ISSN: 1932-6203
 - **Authors:** Tania Fernández-Navarro, Irene Díaz, Isabel Gutiérrez-Díaz, Javier Rodríguez-Carrio, Ana Suárez, Clara G. de los Reyes Gavilán, Miguel Gueimonde, Sonia González.
Title: Predicting obesity from gut microbial composition: does gender matter?
Name: Annals of Nutrition and Metabolism
Number: 74 (Suppl 1)
Pages: 9
Date: 2019
Editorial: Elsevier Science BV
ISSN: 0250-6807
 - **Authors:** Elías F. Combarro, Julen Hurtado de Saracho, Irene Díaz
Title: Minimals Plus: An improved algorithm for the random generation of linear extensions of partially ordered sets
Name: Information Sciences
Number: 501
Pages: Since 50 to 67
Date: 2019
Editorial: Elsevier Science BV
ISSN: 0020-0255
 - **Authors:** Humberto Bustince, Anna Kolesarova, Gracaliz Dimuro, Irene Díaz, Javier Fernández, Radko Mesiar, Susana Montes

- Title:** On some classes of directionally monotone functions
Name: Fuzzy Sets and Systems
Number: <https://doi.org/10.1016/j.fss.2019.01.024>
Pages:
Date: 2019
Editorial: Elsevier Science BV
ISSN: 0165-0114
- **Authors:** Noelia Rico, Irene Díaz, José R. Villar, Enrique de la Cal
Title: Intelligent decision support to determine the best sensory guardrail locations
Name: Neurocomputing
Number: 354
Pages: Since 41 to 48
Editorial: Elsevier
Date: 2019
ISSN: 0925-2312
 - **Authors:** Tania Suárez-Navarro, Irene Díaz, Isabel Gutiérrez-Díaz, Javier Rodríguez-Carrio, Ana Suárez, Clara G. de los Reyes-Gavilán, Miguel Gueimonde, Nuria Salazar, Sonia González
Title: Exploring the interactions between serum free fatty acids and fecal microbiota in obesity through a machine learning algorithm
Name: Food Research International
Number: 121
Pages: Since 533 to 541
Editorial: Elsevier
Date: 2019
ISSN: 0963-9969
 - **Authors:** Agustina Bouchet, Pedro Alonso, Irene Díaz, Susana Montes
Title: On the performance of some edge detectors for gray scale images
Name: Journal of Multiple-Valued Logic and Soft Computing
Number: 32(3-4)
Pages: Since 241 to 256
Date: 2019
Editorial: Old City Publishing INC
ISSN: 1542-3980
 - **Authors:** Griselda R. Bóbeda, Elías F. Combarro, Silvia M. Mazza, Laura I. Giménez, Irene Díaz
Title: Using regression trees to predict citrus load balancing accuracy and costs
Name: International Journal of Computational Intelligence Systems
Number: 12/1
Pages: Since 79 to 89
Editorial: Atlantis Press
Date: 2018
ISSN: 1875-6883
 - **Authors:** Ángel Riesgo, Pedro Alonso, Irene Díaz, Susana Montes
Title: Basic operations for fuzzy multisets
Name: International Journal of Approximate Reasoning
Number: 101
Pages: Since 107 to 118
Editorial: Elsevier

- Date:** 2018
ISSN: 0888-613X
- **Authors:** Raúl Pérez-Fernández, Pedro Alonso, Irene Díaz, Susana Montes, Bernard De Baets
Title: Monotonicity-based consensus states for the monometric rationalisation of ranking rules and how they are affected by ties
Name: International Journal of Approximate Reasoning
Number: 91
Pages: Since 131 to 151
Editorial: Elsevier
Date: 2017
ISSN: 0888-613X
 - **Authors:** Irene Díaz, Juan-Manuel Fernández-Luna
Title: New trends in Information access
Name: International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
Number: 25
Pages: Since 1 to 3
Editorial: World Scientific
Date: 2017
ISSN: 0218-4885
 - **Authors:** Liudmila Reyes, Luis J. Rodríguez-Muñiz, Jaime Fernández, Irene Díaz
Title: Towards an ontological model for technological systems structure representation
Name: International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
Number: 25/2
Pages: Since 37 to 55
Editorial: World Scientific
Date: 2017
ISSN: 0218-4885
 - **Authors:** Irene Díaz, Silvia M. Mazza, Elías F. Combarro, Laura I. Giménez, José E. Gaiad
Title: Machine learning applied to the prediction of citrus production
Name: Spanish Journal of Agricultural Research
Number: 15/2
Pages:
Editorial: Spanish National Institute of Agricultural, food Research and Technology
Date: 2017
ISSN: 1695-971X
 - **Authors:** Raúl Pérez-Fernández, Michael Rademaker, Pedro Alonso, Irene Díaz, Susana Montes, Bernard De Baets
Title: Monotonicity as a tool for differentiating between truth and optimality in the aggregation of rankings
Name: Journal of Mathematical Psychology
Number: 77
Pages: Since 1 to 9
Editorial: Academic Press
Date: 2017
ISSN: 0022-2496
 - **Authors:** Paula Núñez, Irene Díaz, Carmen Perillán, Juan Argüelles, Elena Díaz
Title: Circadian urinary citrate excretion in a rat model of exercise
Name: Life Sciences

- Number:** 169
Pages: Since 65 to 68
Editorial: Pergamon-Elsevier
Date: 2017
ISSN: 0024-3205
- **Authors:** Raúl Pérez-Fernández, Michael Rademaker, Pedro Alonso, Irene Díaz, Susana Montes, Bernard De Baets
Title: Monotonicity-based ranking on the basis of multiple partially specified reciprocal relations
Name: Fuzzy Sets and Systems
Number: 325
Pages: Since 69 to 96
Date: 2017, doi: <http://dx.doi.org/10.1016/j.fss.2016.12.008>
Editorial: Elsevier Science BV
ISSN: 0165-0114
 - **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Vladimír Janiš, Susana Montes
Title: On cardinalities of finite interval-valued hesitant fuzzy sets
Name: Information Sciences
Number: 418-419
Pages: Since 421 to 431
Date: 2017, doi: [10.1016/j.ins.2017.08.041](https://doi.org/10.1016/j.ins.2017.08.041)
Editorial: Elsevier Science BV
ISSN: 0020-0255
 - **Authors:** Xiang Li, Dan Ralescu, Xiaofeng Xu, Lei Li, Irene Díaz
Title: Uncertain Decision-Making: A Mathematical Programming Perspective
Name: Scientific Programming
Number: 2017
Pages: 6372752
Date: 2017
Editorial: Hindawi
ISSN: 1058-9244
 - **Authors:** Raúl Pérez-Fernández, Pedro Alonso, Irene Díaz, Susana Montes, Bernard De Baets
Title: Monotonicity-based consensus states for the monometric rationalisation of ranking rules and how they are affected by ties
Name: International Journal of Approximate Reasoning
Number: 91
Pages: Since 131 to 151
Date: 2017
Editorial: Elsevier Science BV
ISSN: 0888-613X
 - **Authors:** Luigi Troiano, Irene Díaz
Title: An analytical solution to Dujmovic's iterative OWA
Name: International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
Number: 24/2
Pages: Since 165 to 179
Editorial: World Scientific
Date: 2016
ISSN: 0218-4885

- **Authors:** Rodolfo B. Arango, Irene Díaz, Antonio R. Campos, Elías F. Combarro, Emilio R. Canas
Title: Automatic arable land detection with supervised machine learning
Name: Earth Science Informatics
Number: 9/4
Pages: Since 535 to 545
Editorial: Springer
Date: 2016
ISSN: 1865-0473
- **Authors:** Rodolfo B. Arango, Irene Díaz, Antonio R. Campos, Elías F. Combarro, Emilio R. Canas
Title: Mapping cultivable land from satellite imagery with clustering algorithms
Name: International Journal of Applied Earth Observation and Geoinformation
Number: 59
Pages: Since 99 to 106
Editorial: Elsevier Science BV.
Date: 2016
ISSN: 0303-2434
- **Authors:** Raúl Pérez-Fernández, Michael Rademaker, Pedro Alonso, Irene Díaz, Susana Montes, Bernard De Baets
Title: Representation of votes facilitating monotonicity-based ranking rules: from votrix to votex
Name: International Journal of Approximate Reasoning
Number: 73
Pages: Since 87 to 107
Editorial: Elsevier Science BV.
Date: 2016
ISSN: 0888-613X
- **Authors:** Raúl Pérez-Fernández, Pedro Alonso, Humberto Bustince, Irene Díaz, Susana Montes
Title: Applications of finite interval-valued hesitant fuzzy preference relations in group decision making
Name: Information Sciences
Number: 326
Pages: Since 89 to 101
Editorial: Elsevier Science BV
Date: 2016
ISSN: 0020-0255
- **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Aránzazu Jurío, Susana Montes
Title: An hybrid construction method based on weight functions to obtain interval-valued fuzzy relations
Name: Mathematical Methods in the Applied Sciences
Number: 39
Pages: Since 4723 to 4735
Editorial: Wiley
Date: 2016
ISSN: 0170-4214
- **Authors:** Agustina Bouchet, Pedro Alonso, Juan Ignacio Pastore, Susana Montes, Irene Díaz

- Title:** Fuzzy mathematical morphology for color images defined by fuzzy preference relations
Name: Pattern Recognition
Number: 60
Pages: Since 720 to 733
Editorial: Elsevier Science BV
Date: 2016
ISSN: 0031-3203
- **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Susana Montes
Title: On δ - ε -partitions for finite interval-valued hesitant fuzzy sets
Name: International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
Number: Vol. 24, Suppl. 2
Pages: Since 145 to 163
Date: 2016, doi: 10.1142/S0218488516400146
Editorial: World Scientific
ISSN: 0218-4885
 - **Authors:** María Ángeles. de Pedro, J. Morán, Irene Díaz, Lucía Murias, Catalina Fernández-Plaza, Celestino González, Elena Díaz
Title: Circadian Kisspeptin expression in human term placenta
Name: Placenta
Number: 61/6
Pages: Since 1337 to 1339
Date: 2015
Editorial: W B Saunders
ISSN: 0143-4004
 - **Authors:** Silvia Pérez, Lucía Murias, Catalina Fernández-Plaza, Irene Díaz, Celestino González, Jesús Otero, Elena Díaz
Title: Evidence for clock genes circadian rhythms in human full-term placenta
Name: Systems Biology in Reproductive Medicine
Number: 61/6
Pages: Since 360 to 366
Date: 2015
Editorial: Taylor Francis
ISSN: 1939-6368
 - **Authors:** Luigi Troiano, Luis J. Rodríguez-Muñiz, Irene Díaz
Title: Discovering user preferences using Dempster-Shafer theory
Name: Fuzzy Sets and Systems
Number: 278
Pages: Since 98 to 117
Date: 2015
Editorial: Elsevier Science BV
ISSN: 0165-0114
 - **Authors:** Roberto Gil-Pita, David Ayllon, J. Ranilla, C. Llerena-Aguilar, Irene Díaz
Title: A computationally efficient sound environment classifier for hearing aids
Name: IEEE Transactions on Biomedical Engineering
Number: 62/10
Pages: Since 2358 to 2368
Date: 2015
Editorial: IEEE Institute Electrical Electronic Engineers

- ISSN: 0018-9294
- **Authors:** Anca Ralescu, Irene Díaz, Luis J. Rodríguez-Muñiz
Title: A classification algorithm based on geometric and statistical information
Name: Journal of Computational and Applied Mathematics
Number: 275
Pages: Since 335 to 344
Date: 2015
Editorial: Elsevier
ISSN: 0377-0427
 - **Authors:** Rodolfo B. Arango, Irene Díaz, Antonio Campos, Elías F. Combarro, Emilio R. Canas
Title: On the influence of temporal resolution on automatic delimitation using clustering algorithms
Name: Applied Mathematics & Information Sciences
Number: 9/2
Pages: Since 1 to 9
Date: 2015
Editorial: Natural Sciences Publishing
ISSN: 2325-0399
 - **Authors:** Raúl Pérez, Pedro Alonso, Irene Díaz, Susana Montes
Title: Multi-factorial risk assessment: An approach based on fuzzy preference relations
Name: Fuzzy Sets and Systems
Number: 278
Pages: Since 69 to 80
Editorial: Elsevier Science BV
Date: 2015
ISSN: 0165-0114
 - **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Susana Montes
Title: Protecting data: a fuzzy approach
Name: International Journal of Computer Mathematics
Number: 92/9
Pages: Since 1989 to 2000
Editorial: Francis Taylor Online
Date: 2015
ISSN: 1029-0265
 - **Authors:** Raúl Pérez-Fernández, Pedro Alonso, Humberto Bustince, Irene Díaz, Aránzazu Jurio, Susana Montes
Title: Ordering finitely generated sets and finite interval-valued hesitant fuzzy sets
Name: Information Sciences
Number: 325
Pages: Since 375 to 392
Editorial: Elsevier Science BV
Date: 2015
ISSN: 0020-0255
 - **Authors:** Pelayo Quirós, Pedro Alonso, Humberto Bustince, Irene Díaz, Susana Montes
Title: An entropy measure definition for finite interval-valued hesitant fuzzy sets
Name: Knowledge-Based Systems
Number: 84
Pages: Since 121 to 133

- Editorial:** Elsevier Science BV
Date: 2015
ISSN: 0950-7051
- **Authors:** Agustina Bouchet, Pelayo Quirós, Pedro Alonso, Virginia Ballarin, Irene Díaz, Susana Montes
Title: *Gray scale edge detection using interval-valued fuzzy relations*
Name: International Journal of Computational Intelligence Systems
Number: 8/suppl. 2
Pages: Since 16 to 27
Editorial: Atlantis Press
Date: 2015
ISSN: 1875-6883
 - **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Susana Montes
Title: *On the use of fuzzy partitions to protect data*
Name: Integrated Computer-Aid Engineering
Number: 21/4
Pages: Since 355 to 366
Editorial: IOS Press
Date: 2014
ISSN: 1069-2509
 - **Authors:** Luigi Troiano, Luis Rodríguez-Muñiz, Pasquale Marinaro, Irene Díaz
Title: *Statistical analysis of parametric t-norms*
Name: Information Sciences
Number: 257
Pages: Since 138 to 162
Editorial: Elsevier
Date: 2014
ISSN: 0020-0255
 - **Authors:** Irene Díaz, Elías F. Combarro, Pasquale Marinaro, Luigi Troiano
Title: *Ranking COMMPS chemical substances by an improved POT/RLE approach*
Name: Journal of Chemical Information and Modeling
Number: 53/12
Pages: Since 3190 to 3201
Editorial: American Chemical Society
Date: 2013
ISSN: 1549-9596
 - **Authors:** Elías F. Combarro, Irene Díaz, Pedro Miranda
Title: *On random generation of fuzzy measures*
Name: Fuzzy Sets and Systems
Number: 228
Pages: Since 64 to 77
Editorial: Elsevier
Date: 2013
ISSN: 0165-0114
 - **Authors:** Luigi Troiano, Luis Rodríguez-Muñiz, José Ranilla, Irene Díaz
Title: *Interpretability of fuzzy association rules as means of discovering threats to p rivacy*
Name: International Journal of Computer Mathematics
Number: 89/3
Pages: Since 325 to 333

- Editorial:** Taylor Francis
Date: 2012
ISSN: 0020-7160
- **Authors:** Irene Díaz, Luis Rodríguez-Muñiz, Luigi Troiano
Title: Fuzzy sets in data protection. Strategies and cardinalities
Name: Logic Journal of the IGPL
Number: 20/4
Pages: Since 657 to 666
Editorial: Oxford University Press
Date: 2012
ISSN: 1367-0751
 - **Authors:** Irene Díaz, Elena Montañés, José Ranilla, Montserrat Espuña-Pons
Title: A framework for diagnosis of urinary incontinence disease based on scoring measures and automatic classifiers
Name: Computers in Biology and Medicine
Number: 41/1
Pages: Since 11 to 17
Editorial: Oxford University Press
Date: 2011
ISSN: 0010-4825
 - **Authors:** Irene Díaz, Elena Montañés, Elías Combarro, Montserrat Espuña-Pons
Title: An improved feature reduction approach based on redundancy techniques for predicting female urinary incontinence
Name: International Journal of Computer Mathematics
Number: 88/9
Pages: Since 1852 to 1859
Editorial: Taylor Francis
Date: 2011
ISSN: 0020-7160
 - **Authors:** Elena Montañés, José Ramón Quevedo, Irene Díaz, Raquel Cortina, Pedro Alonso, José Ranilla
Title: TagRanker: Learning to recommend ranked tags
Name: Logic Journal of the IGPL
Number: 19/2
Pages: Since 395 to 404
Editorial: Oxford University Press
Date: 2011
ISSN: 1367-0751
 - **Authors:** José Ramón Quevedo, Elena Montañés, José Ranilla, Irene Díaz
Title: Ranked tag recommendation systems based on logistic regression
Name: Neural Network World
Number: 7
Pages: Since 395 to 404
Editorial: Acad Sciences Czech Republic
Date: 2010
ISSN: 963-977
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Blocking neville elimination algorithm for exploiting cache memories
Name: Applied Mathematics and Computation

- Number:** 209
Pages: Since 2 to 9
Editorial: Elsevier
Date: 2009
ISSN: 0096-3003
- **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Scalability of Neville elimination using checkerboard partitioning
Name: International Journal of Computer Mathematics
Number: 85/3-4
Pages: Since 309 to 317
Editorial: Taylor Francis
Date: 2008
ISSN: 0020-7160
 - **Authors:** Elena Montañés, José-Ramón Quevedo, Elías F. Combarro, Irene Díaz, José Ranilla
Title: A hybrid feature selection method for text categorization
Name: International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
Number: 15/2
Pages: Since 133 to 151
Editorial: World Scientific
Date: 2007
ISSN: 0218-4885
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Analyzing scalability of Neville elimination
Name: Journal of Mathematical Chemistry
Number: 40/1
Pages: Since 49 to 61
Editorial: Springer
Date: 2006
ISSN: 0259-9791
 - **Authors:** Elena Montañés, Irene Díaz, José Ranilla, Elías F. Combarro, Javier Fernández
Title: Scoring and selecting terms for text categorization
Name: IEEE Intelligent Systems
Number: 20/3
Pages: Since 40 to 47
Editorial: IEEE Computer Society
Date: 2005
ISSN: 1541-1672
 - **Authors:** Elías F. Combarro, Elena Montañés, Irene Díaz, José Ranilla, Ricardo Mones
Title: Introducing a family of linear measures for feature selection in text categorization
Name: IEEE Transactions on Knowledge and Data Engineering
Number: 17/9
Pages: Since 1223 to 1232
Editorial: IEEE Computer Society
Date: 2005
ISSN: 1041-4347
 - **Authors:** Irene Díaz, Juan Lloréns, Gonzalo Génova, José-Manuel Fuentes
Title: Generating domain representations using a relationships model
Name: Information Systems

- Number:** 30/1
Pages: Since 1 to 19
Editorial: Pergamon-Elsevier
Date: 2005
ISSN: 1873-6076
- **Authors:** Irene Díaz, José Ranilla, Elena Montañés, Javier Fernández, Elías F. Combarro
Title: Improving performance of text categorisation by combining filtering and support vector machines
Name: Journal of the American Society for Information Science and Technology
Number: 55/7
Pages: Since 579 to 592
Editorial: John Wiley Sons
Date: 2004
ISSN: 2330-1643
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Neville elimination: A study of the efficiency using checkerboard partitioning
Name: Linear Algebra and its Applications
Number: 393
Pages: Since 3 to 14
Editorial: Elsevier
Date: 2004
ISSN: 0024-3795
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, Vicente Hernández, José Ranilla
Title: A simple cost-optimal parallel algorithm to solve linear equation systems
Name: INFORMATION: An International Interdisciplinary Journal
Number: 6/3
Pages: Since 297 to 304
Editorial:
Date: 2003
ISSN: ISSN 1343-4500
 - **Authors:** Irene Díaz, Jorge Morato, Juan Lloréns
Title: An algorithm for term conflation based on tree structures
Name: Journal of the American Society for Information Science and Technology
Number: 53
Pages: Since 199 to 208
Editorial: John Wiley Sons
Date: 2002
ISSN: 2330-1643
 - **Authors:** Manuel Velasco, Irene Díaz, Juan Lloréns, Antonio Amescua
Title: Algoritmo de filtrado multi-término para la obtención de relaciones jerárquicas en la vonstrucción automática de un tesauro de descriptores
Name: Revista Española de Documentación Científica
Number: 22/1
Pages: Since 34 to 49
Editorial: CSIC
Date: 1999
ISSN: 1988-4621
 - **Authors:** Irene Díaz, Manuel Velasco, Juan Lloréns, Vicente Martínez
Title: Semi-automatic construction of thesaurus applying domain analysis techniques

Name: International Forum on Information and Documentation
Number: 23/2
Pages: Since 11 to 19
Editorial: International Federation Information and Documentation
Date: 1998
ISSN: 0304-9741

2.2 Other publications

- **Authors:** Irene Díaz, Anca Ralescu, Dan Ralescu, Luis J. Rodríguez-Muñiz
Title: [Some Results and Applications Using Fuzzy Logic in Artificial Intelligence](#)
Name: Studies in Systems, Decision and Control
Number: 142
Pages: Since 575 to 584
Editorial: Springer Natura
Date: 2018
ISSN: 2198-4182
- **Authors:** Augustine Nsang, Irene Díaz, Anca Ralescu
Title: [Ensemble clustering based on heterogeneous dimensionality reduction methods and context-dependent similarity measures](#)
Name: International Journal of Advanced Science & Technology
Number: 64
Pages: Since 138 to 162
Editorial: Inderscience
Date: 2014
ISSN: 2005-4238
- **Authors:** Elías F. Combarro, José Ranilla, Manuel R. Berdasco, Elena Montañés, Irene Díaz
Title: [Set cover feature selection for text categorization and spam detection](#)
Name: International Journal of Advanced Intelligence Paradigms
Number: 1(4)
Pages: Since 442 to 462
Editorial: Inderscience
Date: 2009
ISSN: 1755-0386
- **Authors:** Elena Montañés, Pedro Alonso, Elías F. Combarro, Irene Díaz, Raquel Cortina, José Ranilla
Title: [Using laplace angular measures for feature selection in text categorization](#)
Name: International Journal of Advanced Intelligence Paradigms
Number: 1(1)
Pages: Since 40 to 59
Editorial: Inderscience
Date: 2008
ISSN: 1755-0386
- **Authors:** José Antonio Moreiro, Irene Díaz, Juan Lloréns, Jorge Morato, Manuel Velasco
Title: [Automatic generation of thesauri: A proposal of linguistic-statistical method](#)
Name: Ciencias de la Información
Number: 30(4)
Pages: Since 51 to 59
Editorial: Inderscience
Date: 1999



3. Publicaciones: Capítulos de libros

3.1 Book Chapters

- **Authors:** Noelia Rico, Irene Díaz
Title: Chord progressions selection based on song audio features
Name: Lecture Notes in Computer Science
Number: 10870
Pages: Since 490 to 501
Editorial: Springer
Date: 2018
ISSN: 0302-9743
- **Authors:** Irene Díaz, José Ramón Villar, Enrique de la Cal
Title: Spanish road fork traffic analysis and modeling
Name: Lecture Notes in Computer Science
Number: 10334
Pages: Since 483 to 493
Editorial: Springer
Date: 2017
ISSN: 0302-9743
- **Authors:** Irene Díaz
Title: Technical overview
Name: Joint 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems (IFSA-SCIS)
Number: 10870
Pages: 2
Editorial: IEEE Xplore Digital Library
Date: 2017
ISBN: 978-1-5090-4917-2
- **Authors:** Irene Díaz, Juan Manuel Fernández-Luna
Title: Preface
Clave: Capítulo de Libro
Name: ACM International Conference Proceeding Series. 4th Spanish Conference on Information Retrieval
Number: 14-16

- Pages:** Since 1 to 2
Editorial: ACM
Date: 2016
ISBN: 978-145034141-7
- **Authors:** Irene Díaz, Anca Ralescu
Title: Preface
Clave: Capítulo de Libro
Name: CEUR Workshop Proceedings. Workshop on Fuzzy Logic in AI, FLinAI 2015
Number: 1424
Pages: Since 1 to 2
Editorial: CEUR-WS
Date: 2016
ISBN: 16130073
 - **Authors:** Irene Díaz, Luis J. Rodríguez-Muñiz, Luigi Troiano
Title: On mining sensitive rules to identify privacy threats
Name: Lecture Notes in Computer Science
Number: 8073
Pages: Since 232 to 241
Editorial: Springer
Date: 2013
ISSN: 0302-9743
 - **Authors:** José-Ramón Quevedo, Elena Montañés, José Ranilla, Irene Díaz
Title: Ranked tag recommendation systems based on logistic regression
Name: Lecture Notes in Computer Science
Number: 6076
Pages: Since 237 to 244
Editorial: Springer
Date: 2010
ISSN: 0302-9743
 - **Authors:** Elena Montañés, Elías F. Combarro, Irene Díaz, José Ranilla
Title: Towards automatic and optimal filtering levels for feature selection in text categorization
Name: Lecture Notes in Computer Science
Number: 3646
Pages: Since 239 to 248
Editorial: Springer
Date: 2005
ISSN: 0302-9743
 - **Authors:** Elías F. Combarro, José Ranilla, Ricardo Mones, Noé Vázquez, Irene Díaz, Elena Montañés
Title: Unsupervised learning in information retrieval with NOW architectures
Name: Lecture Notes in Computer Science
Number: 3643
Pages: Since 179 to 188
Editorial: Springer
Date: 2005
ISSN: 0302-9743
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Analyzing the efficiency of block-cyclic checkerboard partitioning in Neville elimination
Name: Lecture Notes in Computer Science
Number: 3019
Pages: Since 963 to 968
Editorial: Springer
Date: 2004
ISSN: 0302-9743
 - **Authors:** Javier Fernández, Elena Montañés, Irene Díaz, José Ranilla, Elías F. Combarro
Title: Text categorization by a machine-learning-based term selection
Name: Lecture Notes in Computer Science

- Number:** 3180
Pages: Since 253 to 262
Editorial: Springer
Date: 2004
ISSN: 0302-9743
- **Authors:** Javier Fernández, Elena Montañés, Irene Díaz, José Ranilla, Elías F. Combarro
Title: [Extraction of document descriptive terms with a linguistic-based machine learning approach](#)
Name: Lecture Notes in Computer Science
Number: 3237(2)
Pages: Since 658 to 661
Editorial: Springer
Date: 2004
ISSN: 0302-9743
 - **Authors:** Elena Montañés, Elías F. Combarro, Irene Díaz, José Ranilla, José-Ramón Quevedo
Title: [Words as rules: feature selection in text categorization](#)
Name: Lecture Notes in Computer Science
Number: 3237(1)
Pages: Since 666 to 669
Editorial: Springer
Date: 2004
ISSN: 0302-9743
 - **Authors:** Javier Fernández, Mones, R.; Irene Díaz, José Ranilla, Elías F. Combarro
Title: [Experiments with self organizing maps in CLEF 2003](#)
Name: Lecture Notes in Computer Science
Number: 3237(1)
Pages: Since 358 to 366
Editorial: Springer
Date: 2004
ISSN: 0302-9743
 - **Authors:** José Ranilla, Irene Díaz, Javier Fernández
Title: [Text categorisation using a partial-matching strategy](#)
Name: Lecture Notes in Computer Science
Number: 2686
Pages: Since 262 to 269
Editorial: Springer
Date: 2003
ISSN: 0302-9743
 - **Authors:** Elena Montañés, José-Ramón Quevedo, Irene Díaz
Title: [A wrapper approach with support vector machines for text categorization](#)
Name: Lecture Notes in Computer Science
Number: 2686
Pages: Since 230 to 237
Editorial: Springer
Date: 2003
ISSN: 0302-9743
 - **Authors:** Elena Montañés, Javier Fernández, Irene Díaz, Elías F. Combarro, José Ranilla
Title: [Measures of rule quality for feature selection in text categorization](#)
Name: Lecture Notes in Computer Science
Number: 2810
Pages: Since 589 to 598
Editorial: Springer
Date: 2003
ISSN: 0302-9743
 - **Authors:** Policarpo Abascal, Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: [Analyzing the efficiency of block-cyclic checkerboard partitioning in Neville elimination](#)
Name: Lecture Notes in Computer Science

Number: 3019

Pages: Since 963 to 968

Editorial: Springer

Date: 2003

ISSN: 0302-9743

- **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, Vicente Hernández, José Ranilla

Title: [A columnwise block-stripping in Neville elimination](#)

Name: Lecture Notes in Computer Science

Number: 2328

Pages: Since 379 to 386

Editorial: Springer

Date: 2002

ISSN: 0302-9743



4. Conferences

4.1 International conferences

- **Authors:** Susana Díaz, Irene Díaz, Susana Montes
Title: *An Interval-Valued Divergence for Interval-Valued Fuzzy Sets*
Conference: IPMU 2020
Place: Lisboa (Portugal) **Date:** 15-19 June 2020
- **Authors:** : Hernán Díaz, Inés González Rodríguez, Juan José Palacios, Irene Díaz, Camino R. Vela
Title: *A Genetic Approach to the Job Shop Scheduling Problem with Interval Uncertainty*
Conference: IPMU 2020
Place: Lisboa (Portugal) **Date:** 15-19 June 2020
- **Authors:** Noelia Rico, Raúl Pérez-Fernández, Irene Díaz
Title: *Ranking-based knn (rknn): A method for avoiding the worst distance metrics in knn*
Conference: 11th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2019)
Place: Praga, República Checa **Date:** 9-13 September 2019
- **Authors:** Noelia Rico, Raúl Pérez-Fernández, Irene Díaz
Title: *Incorporating ranking rules into K-Nearest Neighbours*
Conference: 2019 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2019)
Place: Nueva Orleans (USA) **Date:** 23-26 June 2019
- **Authors:** Raúl Pérez-Fernández, Irene Díaz, Susana Montes, Bernard de Baets
Title: *The dominance, covering and supercovering relations in the context of multiple partially specified reciprocal relations*
Conference: 2019 IFSA World Congress and NAFIPS Annual Conference (IFSA-NAFIPS 2019)
Place: Lafayette, Louisiana (USA) **Date:** 18-21 June 2019
- **Authors:** Catalina Fernández-Plaza, Inés Abad, Elena Díaz, Irene Díaz
Title: *On the influence of sleep habits for predicting preterm births: A machine learning approach*
Conference: International Conference on Artificial Intelligence in Medical Applications (ICAIMA 2018)
Place: Wembley (Londres) **Date:** 15-16 October 2018
- **Authors:** Helbert Espitia, Guzmán Díaz, Irene Díaz
Title: *Control of a permanent magnet synchronous generator using a neuro-fuzzy system*
Conference: Workshop on Engineering Applications 2018 (WEA 2018)
Place: Medellín (Colombia) **Date:** 17-19 October 2018

- **Authors:** Raúl Pérez-Fernández, Irene Díaz, Susana Montes, Bernard De Baets
Title: *Monotonicity of a profile of rankings with ties*
Conference: 18th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU 2018)
Place: Cádiz (España) **Date:** 11-15 June 2018
- **Authors:** Ángel Riesgo, Pedro Alonso, Irene Díaz, Vladimír Janis, Vladimír Kobza, Susana Montes
Title: *On the problem of comparing ordered ordinary fuzzy multisets*
Conference: 18th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. (IPMU 2018)
Place: Cádiz (España) **Date:** 11-15 June 2018
- **Authors:** Emilio Torres-Manzanera , Susana Montes , Irene Daz , Lucía Zapico, Baltasar Gil
Title: *Power means in success likelihood index method*
Conference: 10th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2017)
Place: Varsovia (Polonia) **Date:** 11-15 September 2017
- **Authors:** Helbert Espitia, Guzmán Díaz, Irene Díaz
Title: *Adaptive model for a variable load in a distribution network using an neuro-fuzzy system*
Conference: IEEE Workshop on Power Electronics and Power Quality Applications
Place: Colombia (Bogotá) **Date:** 31 de May- 2 de June 2017
- **Authors:** Luigi Troiano, Irene Díaz y Gaglione Ciro
Title: *Matching media contents with user profiles by means of the Dempster-Shafer theory*
Conference: IEEE International Conference on Fuzzy Systems (Fuzz-IEEE 2017)
Place: Nápoles (Italia) **Date:** 10-14 Julio 2017
- **Authors:** Luigi Troiano, Pravesh Kriplani, Irene Díaz
Title: *Application of regression driven F-transform to smoothing of financial time series*
Conference: 2019 IFSA World Congress (IFSA-SCIS 2017)
Place: Otsu (Japón) **Date:** 27-30 June 2017
- **Authors:** Emilio Torres-Manzanera, Irene Díaz, Susana Montes
Title: *Transforming risk assessment matrices via receiver operating characteristic curves*
Conference: Virtual Scientific Meeting EUREKA 2016
Place: Torreón, Coahuila (México) **Date:** 01-03 December 2016
- **Authors:** Erick González-Caballero, Susana Montes, Irene Díaz, Rafel Espín
Title: *A fuzzy quantifier's method based on compensatory AND*
Conference: Virtual Scientific Meeting EUREKA 2016
Place: Torreón, Coahuila (México) **Date:** 01-03 December 2016
- **Authors:** Pedro Huidobro, Pedro Alonso, Irene Díaz, Susana Montes
Title: *On some properties of color morphology operators*
Conference: 16th International Conference Computational and Mathematical Methods in Science and Engineering (CMMSE 2016)
Place: Rota, Cádiz (España) **Date:** 07-08 Julio 2016
- **Authors:** Ángel Riesgo, Pedro Alonso, Irene Díaz, Susana Montes
Title: *Strategies for colour mathematical morphology*
Conference: 16th International Conference Computational and Mathematical Methods in Science and Engineering (CMMSE 2016)
Place: Rota, Cádiz (España) **Date:** 07-08 Julio 2016
Tipo de participación: Comunicación Oral.
- **Authors:** Raúl Pérez-Fernández, Michael Rademaker, Pedro Alonso, Irene Díaz, Bernard De Baets
Title: *Adding feasibility constraints to a ranking rule under a monotonicity constraint*
Conference: 2015 IFSA World Congress (IFSA 2015)
Place: Gijón (Spain) **Date:** 20-25 September 2015
- **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Vladimir Janis
Title: *An axiomatic definition of cardinality for finite interval-valued hesitant fuzzy sets*
Conference: 2015 IFSA World Congress (IFSA 2015)
Place: Gijón (Spain) **Date:** 20-25 September 2015
- **Authors:** Agustina Bouchet, Pelayo Quirós, Pedro Alonso, Virginia Ballarín, Irene Díaz, Susana Montes

- Title:** Gray scale edge detection using interval-valued fuzzy relations
Tipo de participación: Comunicación Oral
Conference: Eureka 2015
Place: Méjico D.F (Méjico) Date: 2015
- **Authors:** Agustina Bouchet, Pelayo Quirós, Pedro Alonso, Irene Díaz, Susana Montes
Title: Medical edge detection combining fuzzy mathematical morphology with interval-valued relations
Conference: SOCO 2015
Place: Burgos (Spain) Date: 15-17 June 2015
 - **Authors:** Rodolfo de Benito, Antonio Campos, Irene Díaz, Elías F. Combarro, Emilio R. Canas
Title: Smart agro-services: Automatic arable land delimitation based on clustering algorithms
Conference: 15th International Conference Computational and Mathematical Methods in Science and Engineering (CMMSE 2015)
Place: Cádiz (Spain) Date: 06-10 June 2015
 - **Authors:** Rodolfo de Benito, Antonio Campos, Irene Díaz. , Elías F. Combarro, Emilio R. Canas
Title: Evaluation of time-series of satellite reflectance data for land delimitation using clustering algorithms
Conference: 14th International Conference Computational and Mathematical Methods in Science and Engineering (CMMSE 2014)
Place: Cádiz (Spain) Date: 03-07 Julio 2014
 - **Authors:** Anca Ralescu, Irene Díaz.
Title: A distance-frequency classification algorithm
Conference: 14th International Conference Computational and Mathematical Methods in Science and Engineering (CMMSE 2014)
Place: Cádiz (Spain) Date: 03-07 Julio 2014
 - **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz , Susana Montes
Title: Introducing weight functions to construct interval valued fuzzy relations
Conference: 14th International Conference Computational and Mathematical Methods in Science and Engineering (CMMSE 2014)
Place: Cádiz (Spain) Date: 03-07 Julio 2014
 - **Authors:** Luigi Troiano, Irene Díaz
Title: A model for preserving privacy in recommendation systems
Conference: 16th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. (IPMU 2014)
Place: Montpellier (France) Date: 14-18 Julio 2014
 - **Authors:** Ashmad Rawashdeh, Mohamed Rawashdeh, Irene Díaz, Anca Ralescu.
Title: Semantic similarity between nodes in a social network
Conference: 16th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. (IPMU 2014)
Place: Montpellier (France) Date: 14-18 Julio 2014
 - **Authors:** Pérez R., Pedro Alonso, Irene Díaz, Susana Montes
Título: Aggregation of risk-assessment matrices for human reliability in transportation systems.
Conference: EUROFUSE Workshop on Imprecision and Uncertainty in Preference Modeling and Decision Making (EUROFUSE'13).
Place: Oviedo, España. Date: 2-4 December 2013
 - **Authors:** Luigi Troiano, Irene Díaz, Amhrita Kriplani
Title: A recommender system based on Dempster-Shafer theory
Conference: EUROFUSE Workshop on Imprecision and Uncertainty in Preference Modeling and Decision Making (EUROFUSE'13).
Place: Oviedo (Spain) Date: 2-4 December 2013
 - **Authors:** Pasquale Marinaro, Irene Díaz, Luigi Troiano,
Title: A model to generate process logs with equi-probable runs
Conference: 13th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2013)
Place: Almería (Spain) Date: 22-27 June 2013
 - **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Susana Montes

- Title:** *Protection of privacy in microdata*
Conference: 13th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2013)
Place: Almería (Spain) **Date:** 22-27 June 2013
- **Authors:** Irene Díaz, Anca Ralescu
Title: *Privacy issues in social Networks: A brief survey*
Conference: 15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. (IPMU 2012)
Place: Catania (Italia) **Date:** 9-13 Julio 2012
 - **Authors:** Luigi Troiano, Irene Díaz, Luis J. Rodríguez-Muñiz
Title: *A model for assessing the risk of revealing shared secrets in social networks*
Conference: 15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. (IPMU 2012)
Place: Catania (Italia) **Date:** 9-13 Julio 2012
 - **Authors:** Pelayo Quirós, Pedro Alonso, Irene Díaz, Susana Montes
Title: *Fuzzy sets as a tool for protecting sensitive information*
Tipo de participación: Oral
Conference: 5th International Conference of ERCIM Working Group on Computing & Statistics (ERCIM 2012)
Place: Oviedo (Spain) **Date:** 1-3 December 2012
 - **Authors:** Pedro Miranda, Elías F. Combarro, Irene Díaz.
Title: *The problem of random generation of non-additive measures*
Conference: The Pyrenees International Workshop and Summer School on Statistics, Probability and Operations Research (SPO 2011)
Place: Jaca (España) **Date:** 15-18 September 2011
 - **Authors:** Elías F. Combarro, Pedro Miranda, Irene Díaz.
Title: *On random generation of fuzzy measures*
Conference: 6th International Summer School on Aggregation Operators (AGOP 2011)
Place: Benevento (Italia) **Date:** 11-15 Julio 2011
 - **Authors:** Luis J. Rodríguez-Muñiz, Luigi Troiano, Irene Díaz
Title: *Output distribution of aggregation operators: A statistical study*
Conference: 4th International Conference of ERCIM Working Group on Computing & Statistics (ERCIM 2011)
Place: Londres (Reino Unido) **Date:** 17-19 December 2011
 - **Authors:** Pedro Miranda, Irene Díaz, Elías F. Combarro
Title: *Linear extensions and random generation of fuzzy measures*
Conference: TUIM 2011
Place: Gijón (España) **Date:** 7 November 2011
 - **Authors:** Irene Díaz, Luis Rodríguez-Muñiz, Luigi Troiano
Title: *Assessing the disclosure risk by fuzzy sets and cardinalities*
Conference: 10th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2010)
Place: Almeria (España) **Date:** 26-30 June 2010
 - **Authors:** Luigi Troiano, Luis Rodríguez-Muñiz, José Ranilla, Irene Díaz
Title: *Mining rules for disclosing sensitive information*
Conference: 10th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2010)
Place: Almeria (España) **Date:** 26-30 June 2010
 - **Authors:** Elías F. Combarro, Irene Díaz, Pedro Miranda
Title: *Random generation on order polytopes and fuzzy measures*
Conference: 10th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2010)
Place: Almeria (España) **Date:** 26-30 June 2010
 - **Authors:** Irene Díaz, José Ranilla, Luis Rodríguez-Muñiz, Luigi Troiano
Title: *Identifying the risk of attribute disclosure by mining fuzzy rules*
Conference: 14th International Conference on Information Processing and Management of Uncer-

- tainty in Knowledge-Based Systems (IPMU 2010)
Place: Dortmund (Alemania) **Date:** 28 June - 2 Julio 2010
- **Authors:** José-Ramón Quevedo, Elena Montañés, José Ranilla, Irene Díaz
Title: TagR: Un sistema de recomendación de etiquetas basado en regresión logística
Conference: CERI 2010
Place: Madrid (España) **Date:** 15-16 June 2010
 - **Authors:** Elías F. Combarro, José Ranilla, Raquel Cortina, Pedro Alonso, Irene Díaz
Title: Dimensionality reduction and parallel computing for malware detection
Conference: 9th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2009)
Place: Gijón (España) **Date:** 30 June, 1-3- Julio 2009
 - **Authors:** Irene Díaz, Elena Montañés, Elías F. Combarro, Montserrat Espuña-Pons
Title: An improved feature reduction approach based on redundancy techniques for medical diagnosis
Conference: 9th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2009)
Place: Gijón (España) **Date:** 30 June, 1-3- Julio 2009
 - **Authors:** Elena Montañés, José-Ramón Quevedo, Irene Díaz, José Ranilla
Title: Collaborative tag recommendation based on logistic regression
Conference: ECML PKDD 2009
Place: Bled (Slovenia) **Date:** 6-10 September 2009
 - **Authors:** Elena Montañés, Irene Díaz, Elías F. Combarro, José Ranilla
Title: Removing redundancy from relevant features in text classification
Conference: 12th Information Processing and Management of Uncertainty in Knowledge-Based Systems International Conference (IPMU 2008)
Place: Málaga (España) **Date:** 22-27 June 2008
 - **Authors:** Elías F. Combarro, Elena Montañés, Irene Díaz, Raquel Cortina, Pedro Alonso, José Ranilla
Title: NoW architectures, dimensionality reduction and self-organizing maps for information retrieval
Conference: 2006 International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2006)
Place: Chania, Crete (Grecia) **Date:** 27 October - 1 November 2006
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Scalability of Neville elimination using checkerboard partitioning
Conference: 6th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2006)
Place: Madrid (España) **Date:** 20-24 September 2006
 - **Authors:** Elías F. Combarro, Elena Montañés, Irene Díaz, Raquel Cortina, Pedro Alonso, José Ranilla
Title: Dimension reduction techniques for information retrieval using self-organizing maps
Conference: 11th Information Processing and Management of Uncertainty in Knowledge-Based Systems International Conference (IPMU 2006)
Place: Paris (Francia) **Date:** 2-7 Julio 2006
 - **Authors:** Elena Montañés, Elías F. Combarro, José Ranilla, Irene Díaz
Title: Finding optimal linear measures for feature selection in text categorization
Conference: 21st Annual ACM Symposium on Applied Computing (SAC 2006)
Place: Dijon (Francia) **Date:** 23-27 April 2006
 - **Authors:** Elías F. Combarro, Elena Montañés, José Ranilla, Irene Díaz
Title: Angular measures for feature selection in text categorization
Conference: 21st Annual ACM Symposium on Applied Computing (SAC 2006)
Place: Dijon (Francia) **Date:** 23-27 April 2006
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla
Title: Blocking neville elimination algorithm for exploiting cache memories
Conference: 2005 International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2005)
Place: Loutraki (Grecia) **Date:** 21-26 October 2005
 - **Authors:** Elena Montañés, Elías F. Combarro, Irene Díaz, José Ranilla
Title: Towards automatic and optimal filtering levels for feature selection in text categorization
Conference: 6th International Symposium on Intelligent Data Analysis (IDA 2005)

- Place:** Madrid (España) **Date:** 8-10 September 2005

■ **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla

Title: *Analyzing scalability of neville elimination*

Conference: Conference on Computational and Mathematical Methods on Science and Engineering (CMMSE-2005)

Place: Alicante (España) **Date:** 27-30 June 2005
- **Authors:** Ricardo Mones, Noé Vázquez, Irene Díaz, José Ranilla, Elías F. Combarro, Elena Montañés

Title: *Unsupervised learning in information retrieval using NOW architectures*

Conference: 10th International Conference on Computer Aided Systems Theory (Eurocast 2005)

Place: Gran Canaria (España) **Date:** 7-11 Febrero 2005
- **Authors:** Javier Fernández, Elena Montañés, Irene Díaz, José Ranilla, Elías F. Combarro

Title: *Text categorization by a machine-learning-based term selection*

Conference: 15th International Conference on Database and Expert Systems Applications (DEXA'04)

Place: Zaragoza (España) **Date:** 30 Agosto - 3 September 2004
- **Authors:** Elena Montañés, Elías F. Combarro, Irene Díaz, José Ranilla, José-Ramón Quevedo

Title: *Words as rules: Feature selection in text categorization*

Conference: International Conference on Computational Science 2004 (ICCS 2004)

Place: Kraków (Polonia) **Date:** 6-9 June 2004
- **Authors:** Javier Fernández, Elena Montañés, Irene Díaz, José Ranilla, Elías F. Combarro

Title: *Extraction of document descriptive terms with a linguistic-based machine learning approach*

Conference: International Conference on Computational Science 2004 (ICCS 2004)

Place: Kraków (Polonia) **Date:** 6-9 June 2004
- **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla

Title: *Rowwise parallel neville elimination: A study of its scalability*

Conference: 6th International Meeting on High Performance Computing for Computational Science (VECPAR'04)

Place: Valencia (España) **Date:** June 2004
- **Authors:** Policarpo Abascal, Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla

Title: *Analyzing the efficiency of block-cyclic checkerboard partitioning in Neville elimination*

Conference: 5th International Conference on Parallel Processing and Applied Mathematics (PPAM 2003)

Place: Czestochowa (Polonia) **Date:** 7-10 September 2003
- **Authors:** Elena Montañés, Javier Fernández, Irene Díaz, Elías F. Combarro, José Ranilla

Title: *Measures of Rule Quality for Feature Selection in Text Categorization*

Conference: 5th International Symposium on Intelligent Data Analysis (IDA 2003)

Place: Berlín (Alemania) **Date:** Agosto 2003
- **Authors:** Javier Fernández, Ricardo Mones, Irene Díaz, José Ranilla, Elías F. Combarro

Title: *Clustering and retrieval of Spanish news documents using self organizing maps*

Conference: Cross Language Evaluation Forum 2003 Workshop (CLEF 2003)

Place: Trondheim (Noruega) **Date:** 28-30 Agosto 2003
- **Authors:** José Ranilla, Irene Díaz, Javier Fernández

Title: *Text categorisation using a partial-matching strategy*

Conference: 7th International Work-Conference on Artificial and Natural Neural Networks (IWANN 2003)

Place: Menorca (España) **Date:** 8-10 June 2003
- **Authors:** José-Ramón Quevedo, Elena Montañés, Irene Díaz

Title: *A wrapper approach with support vector machines for text categorization*

Conference: 7th International Work-Conference on Artificial and Natural Neural Networks (IWANN 2003)

Place: Menorca (España) **Date:** 8-10 June 2003
- **Authors:** Javier Fernández, Elías F. Combarro, Irene Díaz, Elena Montañés, José Ranilla

Title: *Text categorisation with support vector machines and feature reduction*

Conference: International Conference on Intelligent Agents, Web Technologies and Internet Commerce (IAWTIC 2003)

Place: Viena (Austria) **Date:** 12-14 Febrero 2003
- **Authors:** Elías F. Combarro, Irene Díaz, Elena Montañés, José Ranilla

- Title:** *Aplicación de distintos métodos de aprendizaje automático a la clasificación documental*
Conference: Conferencia Iberoamericana en Sistemas, Cibernética e Informática
Place: Orlando (EEUU) **Date:** Julio 2002
- **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, José Ranilla, Vicente Hernández
Title: *Parallel Neville elimination: A simple cost-optimal algorithm*
Conference: Workshop on High Performance Scientific and Engineering Computing with Applications (ICPP 2001 Workshops)
Place: Valencia (España) **Date:** 3-7 September 2001
 - **Authors:** Pedro Alonso, Raquel Cortina, Irene Díaz, Vicente Hernández, José Ranilla
Title: *A columnwise block-stripping in Neville elimination*
Conference: 4th International Conference on Parallel Processing and Applied Mathematics (PPAM 2001)
Place: Naleczow (Polonia) **Date:** 9-12 September 2001
 - **Authors:** Irene Díaz, José-Miguel Fuentes, Juan Lloréns
Title: *RSHP: A scheme to classify Information in a domain analysis environment*
Conference: International Conference on Enterprise Information Systems
Place: Setubal (Portugal) **Date:** 7-10 Julio 2001
 - **Authors:** Paloma Martínez, Irene Díaz, Antonio Monzón, Jorge Morato, Manuel Velasco
Title: *Requirements specification reuse through the use of analysis facilities*
Conference: World Multiconference on Systemics, Cybernetics and Informatics
Place: Orlando (EEUU) **Date:** 23 - 26 Julio 2000
 - **Authors:** Juan Lloréns, Irene Díaz, José-Miguel Fuentes, Gonzalo Génova
Title: *A new approach to domain analysis*
Conference: World Multiconference on Systemics, Cybernetics and Informatics
Place: Orlando (EEUU) **Date:** 23 - 26 Julio 2000
 - **Authors:** Irene Díaz, Manuel Velasco, José-Manuel Molina
Title: *An application of fuzzy logic to domain analysis*
Conference: EUROFUSE-SIC'99
Place: Budapest (Hungría) **Date:** 25-28 May 1999
 - **Authors:** Manuel Velasco, Irene Díaz, Jorge Morato, Adoración de Miguel
Title: *A Relationships Extraction Methodology for a Domain Analysis Process*
Conference: World Multiconference on Systemics, Cybernetics and Informatics
Place: Orlando (EEUU) **Date:** 31 Julio - 4 Agosto 1999
 - **Authors:** Irene Díaz, Manuel Velasco, José-Manuel Molina
Title: *Fuzzy reasoning in K-means classification method*
Conference: EUSFLAT-ESTYLF'99
Place: Palma de Mallorca (España) **Date:** 22-25 September 1999
 - **Authors:** José-Miguel Fuentes,; Manuel Velasco, Irene Díaz, Juan Lloréns
Title: *Software reuse using CTD and repositories*
Conference: Software Engineering and Applications
Place: Scottsdale (Arizona-USA) **Date:** 6-8 October 1999
 - **Authors:** Jorge Morato, Manuel Velasco, Irene Díaz, Juan Lloréns
Title: *Informetric measures in an automatic domain generation environment*
Conference: XIV International Symposium on Computer and Information Sciences (ISCIS'99)
Place: Izmir (Turquía) **Date:** 18-20 October 1999
 - **Authors:** Irene Díaz, Manuel Velasco, Jorge Morato, Juan Lloréns
Title: *An application of linguistic techniques to automatically normalise requirements*
Conference: XIV International Symposium on Computer and Information Sciences (ISCIS'99)
Place: Izmir (Turquía) **Date:** 18-20 October 1999
 - **Authors:** Irene Díaz, Manuel Velasco, Jorge Morato, Juan Lloréns
Title: *Automatic acquisition of requirements*
Conference: XII International Conference Software & Systems Engineering & Applications (ICCSEA 99)
Place: París (Francia) **Date:** 8-10 December 1999
 - **Authors:** Irene Díaz, Jorge Morato, Manuel Velasco, Juan Lloréns
Title: *A methodology for classifying information in a process of domain analysis*

Conference: XII International Conference Software & Systems Engineering & Applications (ICCSEA 99)
Place: París (Francia) **Date:** 8-10 December 1999

4.2 Spanish Conferences

- **Authors:** Gustavo Giménez, Sergio Bramardi, Irene Díaz, Susana Montes
Title: *Calibrating the support vector machine (SVM) from simulated growth curves by mixed nonlinear models for the prediction of harvest in pears "Beurre D' Anjou"*
Conference: XVI Conferencia Española de Biometría
- **Authors:** Maria Carmela Vitelli, Irene Díaz, Luigi Troiano
Title: *A method to generate equiprobable runs in TFPG models*
Conference: CERI 2016
Place: Madrid (Spain) **Date:** 12-14 de June 2016
- **Authors:** Liudmila Reyes-Alvarez, Jaime Fernández, Luis J. Rodríguez-Muñiz, Irene Díaz
Title: *Ontological models for information retrieval of product-service: Trends and open issues*
Conference: CERI 2016 Publicación: ACM Digital Library
Place: Madrid (Spain) **Date:** 12-14 de June 2016
- **Authors:** Catalina Fernández-Plaza, Inés Abad, Elena Irene Díaz, Irene Díaz
Title: *La incidencia de la luz durante la noche como factor de riesgo del parto prematuro*
Conference: 25 Conference Nacional de la Sección Medicina Perinatal
Place: Madrid (Spain) **Date:** 2016
- **Authors:** Catalina Fernández-Plaza, Inés Abad, Elena Díaz, Irene Díaz
Title: *Modelo predictivo de parto prematuro basado en factores de riesgo*
Conference: 25 Conference Nacional de la Sección Medicina Perinatal
Place: Madrid (Spain) **Date:** 2016
- **Authors:** Elena Montañés, Pedro Alonso, Elías F. Combarro, Irene Díaz, Raquel Cortina, José Ranilla.
Title: *Polynomial Measures for Dimensionality Reduction in Text Categorization*
Conference: 2006 V Taller Nacional de Minería de Datos y Aprendizaje (TAMIDA 2007) - II Conference Español de Informática (CEDI 2007)
Place: Zaragoza (España) **Date:** September 2007
- **Authors:** Elías F. Combarro, Elena Montañés, Irene Díaz, Raquel Cortina, Pedro Alonso, José Ranilla.
Title: *Framework para la Gestión Documental en las Administraciones Públicas*
Conference: X Jornadas sobre Tecnologías de la Información para la Modernización de las Administraciones Públicas (TECNIMAP 2007)
Place: Gijón (España) **Date:** November 2007
- **Authors:** Manuel Velasco, Irene Díaz, José-Antonio Moreiro, Juan Lloréns
Title: *Hacia la Generación Automática de Tesauros.*
Conference: ISKO (1999).
- **Authors:** Irene Díaz, Manuel Velasco, José-Manuel Molina; Moreiro, J.A.; Morato, J.; Juan Lloréns
Title: *Una Aproximación a la Generación Automática de Tesauros.*
Conference: INFO'99 (1999).
- **Authors:** Irene Díaz, Manuel Velasco, José Manuel Molina
Title: *Aplicación de la Lógica Borrosa al Cálculo de Distancias entre Componentes Representativos de un Dominio en un Proceso Global de Análisis de Dominios.*
Tipo de participación: Conference Español sobre Tecnologías y Lógica Fuzzy (1998).

4.3 Invited conferences

- **Authors:** Irene Díaz
Title: *Agricoltore di precisione*
Conference: Festa dell'Uva
Place: Solopaca (Italy) **Date:** 7 September 2017
- **Authors:** Irene Díaz
Title: *Intelligent approaches to solve environmental and biological problems*
Conference: IWSC: International workshop on soft computing - theory and applications in medical

engineering

Place: Himeji (Japan) **Date:** 26 June 2017

- **Authors:** Irene Díaz

Title: Machine Learning

Conference: XXI Reunión Científica del Grupo Argentino de Biometría

Place: Oviedo (Spain) **Date:** 28-30 de September 2016



5. Research projects

5.1 Public funding

- **Title:** Relations between mathematic skills, statistical culture and computational thinking
Funded by: European Union
Code: UNOV-18-RLD-UE-5
Period:P Since: 15/11/2018 to: 14/11/2020 N° number of months:36
Principal researcher: Luis J. Rodríguez Muñiz
Number of researchers: 7
- **Title:** AIDA- Artificial Intelligence & Data Analysis
Funded by: Regional government of Asturias
Code: FC-GRUPIN-IDI/2018/000176
Period: Since: 01/01/2018 to: 31/12/2020 N° number of months:36
Principal researcher: Camino Rodríguez Vela
Number of researchers: 25
- **Title:** Information aggregation and characterization of evaluators in human processes
Funded by: Ministry of Economy, Industry and Competitivity
Code: TIN2007-87600-P
Period: Since: 01/01/2018 to: 31/12/2021 N° number of months:48
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 3
- **Title:** Distributed and collaborative processing of sound signals
Funded by: Ministry of Economy, Industry and Competitivity
Code: TEC2012-38142-C04-04
Period: Since: 01/01/2013 to: 31/12/2015 N° number of months:36
Principal researcher: José Ranilla Pastor
Number of researchers: 5
- **Title:** Data mining in precision agriculture
Funded by: University of Oviedo
Code: UNOV-13-EMERG-GIJON-10
Period: Since: 23/07/2013 to: 31/12/2013 N° number of months:5
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 5
- **Title:** Distributed and collaborative processing of sound signals

Funded by: FICYT

Code: SV-PA-13-ECOEMP-38

Period: Since: 01/04/2013 to: 31/12/2013 N° number of months:10

Principal researcher: José Ranilla Pastor

Number of researchers: 5

- **Title:** **Feature reduction and high performance computing for high dimensional problems**
Funded by: Ministerio de Educación y Ciencia
Code: TIN2010-14971
Period: Since: 01/01/2011 to: 31/12/2012 N° number of months:24
Principal researcher: José Ranilla Pastor
Number of researchers: 6
- **Title:** **Improving mathematic skills for first course university students**
Funded by: Ministry of Education
Code: EA2011-0108
Period: Since: 01/12/2011 to: 30/11/2012 N° number of months:14 meses
Principal researcher: Luis J. Rodríguez-Muñiz
Number of researchers: 14
- **Title:** **Flexible system for feature reduction in high dimensional problems**
Funded by: FICYT
Code: COF08-10
Period: Since: 01/01/2009 to: 31/08/2010 N° number of months:12
Principal researcher: José Ranilla Pastor
Number of researchers: 6
- **Title:** **Flexible system for feature reduction in high dimensional problems**
Funded by: Ministry of Education and Science
Code: TIN2007-61273
Period: Since: 01/01/2007 to: 30/11/2010 N° number of months:35
Principal researcher: José Ranilla Pastor
Number of researchers: 6
- **Title:** **Parallel information organization and retrieval**
Funded by: Ministry of Education and Science
Code: TIN2004-05920
Period: Since: 15/12/2004 to: 15/12/2007 N° number of months:36
Principal researcher: José Ranilla Pastor
Number of researchers: 6
- **Title:** **Development of an intelligent software based on Machine Learning applied to real problems of classification and regression**
Funded by: Ministry of Education and Science
Code: TIC2001-3579
Period: Since: 01/12/2001 to: 30/11/2004 N° number of months:36
Principal researcher: Antonio Bahamonde Rionda
Number of researchers: 7
- **Title:** **Parallel computing: Bidimensional partitioning in Neville elimination**
Funded by: University of Oviedo
Code: NP-01-513-2
Period: Since: 24/03/1999 to: 30/12/1999 N° number of months:9
Principal researcher: Pedro Alonso Velázquez
Number of researchers: 3
- **Title:** **High Level Software Project Reuse Based on Automatic Domain Generation**
Funded by: European Union. UE ESPRIT DG XIII
Code: ESPRIT-25762
Period: Since: 01/01/1998 to: 30/04/2000 N° number of months:28
Principal researcher: Pablo Ribes
Number of researchers: 7
- **Title:** **Automatic generation of thesaurus for component architectures**
Funded by: CICYT

Code: TIC97-0314
Period: Since: 01/08/1997 to: 29/01/2002 N° number of months:54
Principal researcher: José Antonio Moreira González
Number of researchers: 6

5.2 Private projects

- **Title:** EOLO-Maximum wind speed
Funded by: TSK
Code: FUO-072-17
Period: Since: 10/02/2017 to: 09/08/2018 N° number of months:18
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 4
- **Title:** Improving efficiency and productivity in a concrete factory using a new productive model 4.0.
Funded by: Tudela-Veguín company
Code: FUO-073-17
Period: Since: 10/01/2017 to: 30/11/2017 N° number of months:11
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 4
- **Title:** Data analysis to improve industrial processes
Funded by: Tudela-Veguín company
Code: FUO-159-16
Period: Since: 07/04/2016 to: 24/05/2016 N° number of months:1
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 2
- **Title:** An ontology design to develop an intelligent catalogue
Funded by: Metalux
Code: FUO-003-16
Period: Since: 01/01/2016 to: 31/08/2017 N° number of months:18
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 3
- **Title:** Algorithms and intelligent techniques for precision agriculture
Funded by: SERESCO
Code: FUO-EM-208-15
Period: Since: 02/07/2015 to: 1/07/2016 N° number of months:12
Principal researcher: Irene Díaz Rodríguez
Number of researchers: 4



6. Other research merits

6.1 Supervised PhD

- Raúl Pérez Fernández.
Title: Monotonicity-based consensus states for the monometric rationalisation of ranking rules with application in decision making. May 2017
- Rodolfo de Benito Arango.
Title: Planning and decision support systems in the frame of precision agriculture. July 2016
- Pelayo Quirós Cueto.
Title: Mathematical tools for hesitant fuzzy sets. Applications. November 2015
- Elena Montañés Rocés.
Title: New techniques of term selection for document classification. September 2003

6.2 Funded Research Stays

1. Department of Engineering. University of Naples
Period: Since: 01/03/2013 to: 28/05/2013 N° number of months:3.0
2. Kermit Group. University of Ghent
Period: Since: 01/09/2016 to: 30/09/2016 N° number of months:1



7. About teaching

7.1 Courses

- Programming, Computer Science Degree
- Software Design, Computer Science Degree.
- Information Retrieval, Library Science Degree
- Automata and Discrete Mathematics, Computer Science Degree.
- Computability, Computer Science Degree.
- Data Structure, Computer Science Degree.
- Knowledge Engineering, Computer Science Degree.
- Business Intelligence, Computer Science Degree.
- Intelligent Systems, Computer Science Degree.
- Machine Learning, Computer Science Doctorate program
- Soft Computing for Information Retrieval, Soft Computing and Data Analysis Master
- Knowledge Based Methods Applied to Business, Computer Science Master
- Data Mining for Business para los Negocios, Data Analysis for Business Intelligence Master

7.2 Conferences and innovation workshops

- **Authors:** María R. Sierra, Irene Díaz.
Title: *Improving teaching and evaluation methodology using rubrics*
Conference: Innovation workshop at University of Oviedo (2018)
- **Authors:** Irene Díaz, Camino Rodríguez-Vela.
Title: *Self evaluation design for an Automata and Discrete Mathematics Course*
Conference: Innovation workshop at University of Oviedo (2013)
- **Authors:** María R. Sierra, Irene Díaz, Luis J. Rodríguez Muñiz.
Title: *Exploring computing skills to students of a mathematics degree*
Conference: 26 Conference of Education in Engineering studies (CUIEET 2018)
- **Authors:** María R. Sierra, Irene Díaz.
Title: *An assessment system to improve student results in a Computing course for mathematicians*
Conference: 10th annual International Technology, Education and Development Conference (INTED 2016)
- **Authors:** Luis J. Rodríguez-Muñiz, Ana B. Bernardo, María Esteban, Juan Carlos Nuñez,

Esteban Fernández, Irene Díaz

Title: *What are the main dropout factors in the University of Oviedo?*

Conference: Joint Conference of PL4SD and EUROSTUDENT

- **Authors:** Miguel A. González, Carlos Mencía, Camino Rodríguez-Vela, Irene Díaz
Title: *Self-assessment module for the students of Automata and Discrete Mathematics*
Conference: 8th annual International Technology, Education and Development Conference (INTED 2014)
- **Authors:** Miguel A. González, Carlos Mencía, Camino Rodríguez-Vela, Irene Díaz
Title: *Self-assessment module for the students of Automata and Discrete Mathematics*
Conference: 8th annual International Technology, Education and Development Conference (INTED 2014)
- **Authors:** Miguel Ángel González Fernández, Camino Rodríguez-Vela, Irene Díaz
Title: *A Comparison of teaching and evaluation methodologies for Automata and Discrete Mathematics*
Conference: 5th International Conference of Education, Research and Innovation (ICERI 2012)
- **Authors:** Irene Díaz, Camino R. Vela.
Title: *Evaluation task in European Higher Education: A case study*
Conference: 3rd International Conference on Education and New Learning Technologies (Edulearn 2011)
- **Authors:** Alfredo Alguero, Irene Díaz, María José Suárez-Cabal, José Ramón Villar.
Title: *Coordinating course contents according to ESHE*
Conference: 1st International Conference on Education and New Learning Technologies (Edulearn 2009)
- **Authors:** Irene Díaz, Angeles D. Fondón, Fernando Las-Heras, Marta Hernando, José Ángel Huidobro, José Ramón Villar.
Title: *Adapting telecommunication studies to European Space of Education*
Conference: Iberoamerican Conference of University teaching(CIDU 2009)
- **Authors:** Irene Díaz, Alfredo Alguero.
Title: *Active methodologies en Logic*
Conference: Conference of Innovation in Engineering (CUIEET 2009)
- **Authors:** Alfredo Alguero, Irene Díaz, María José Suárez-Cabal, José Ramón Villar.
Title: *Coordinación de contenidos entre asignaturas: Un caso práctico*
Conference: Conference of Innovation in Engineering (CUIEET 2009)
- **Authors:** Irene Díaz, Fernando Las-Heras, Marta Hernando, José ángel Huidobro, José Ramón Villar.
Title: *Enhancing learning according to European Credit Transfer System*
Conference: International Conference of Education Research and innovation (ICERI 2009)
- **Authors:** Irene Díaz
Title: *Discrete mathematics for telecommunication engineering*
Conference: Conference Universitario de Innovación Educativa en las Enseñanzas Técnicas (CUIEET 2008)

7.3 International projects

- **Title:** *Strengthening teaching competences in higher education in Natural and Mathematical Sciences (ERASMUS+K2)*
Funded by: Comunidad Económica Europea
Code: UE-18-TECOMP-598434
Entidades participantes: Universidad de Oviedo, Universidad de Granada, Universidad de Gante, Universidad de Nis, Universidad de Belgrado, Universidad de Novi Sad, Universidad de Kragujevac, Universidad Eqrem Cabej, Universidad Fan S. Noli, Universidad Matej Bel, Universidad de Ostrava
Period: Since: 15/11/2018 to: 15/11/2021 N° number of months:27
Principal researcher: Jelena Ignjatovit
Number of researchers: 6

- **Title:** EUREKA SD
Funded by: Comunidad Económica Europea
Enidades participantes: Universidad de Oviedo, Universidad de Granada y 20 universidades Latioamericanas (11) y Europeas (7)
Period: Since: 01/06/2013 to: 31/05/2016 N° number of months:36
Principal researcher: Jorge Marx Gómez
Number of researchers: 6
- **Title:** HAMOC: Harmonization and Modernization of the Curriculum of the Primary Teacher Education
Funded by: Comunidad Económica Europea
Enidades participantes: Universidad de Novi Sad, Nis, Kragujevac, Belgrade, Ljubljana, Oviedo, Matej Bel University, Claude Bernard-Lyon. Ministerio de Educación de Serbia,
Period: Since: 01/10/2011 to: 30/09/2014 N° number of months:36
Principal researcher: Natasha Brankovic
Number of researchers: 6

7.4 Academic Stays

- University of Ghent
Period: Since: 17/05/2015 to: 22/10/2015
Funded by: Erasmus program
- Universidad of Sannio
Period: Since: 30/06/2014 to: 04/07/2014
Funded by: Erasmus program



8. Academic activities

8.1 Research evaluation activities

1. Evaluator for the Spanish Agency for Research
2. Evaluator for the Spanish Agency for the Slovak Research and Development Agency
3. Evaluator for the Spanish Agency for Accreditation and Evaluation
4. Evaluator for the Andalusian Agency for Knowledge

8.2 Other Activities

1. Associated Editor of Journal of Ambient Intelligence & and Humanized Computing
2. Reviewer for several journals such as:
 - a) Information Sciences,
 - b) Computers in Biology and Medicine,
 - c) International Journal of Uncertainty Fuzziness and Knowledge-based Systems,
 - d) Journal of the American Society for Information Science,
 - e) NeuroComputing,
 - f) Fuzzy Optimization and Decision Making,
 - g) International Journal of Computer Mathematics,
 - h) Revista Española de Documentación Científica,
 - i) Journal of Intelligent and Fuzzy Systems,
 - j) Journal of Computational and Applied Mathematics,
 - k) IEEE Intelligent Systems, Information Processing and Management,
 - l) Applied Soft Computing, Expert Systems with Applications,
 - m) Fuzzy Sets and Systems,
 - n) International Journal of Approximate Reasoning.
 - ñ) Iranian Journal of Fuzzy Systems
 - o) IEEE Transactions on Cybernetics
3. Member of the editorial board of some conferences such as CAEPIA, CASon, CERI, EISIC, FOSINT, HAIS, IFSA, EUSFLAT, CAEPIA, IPMU, ISCIF, JENUJ, MAICS, NABIC, NWeSP, SOCO.
4. Program Committee Chair for IFSA-ISCIS 2017 and CERI 2016

DECLARATION OF INTENT

I declare that I agree to carry out a part of teaching at the study program of master academic studies „Machine Learning“ whose holder is the Faculty of Natural Sciences and Mathematics of the University of Niš.

I am particularly interested in teaching a part of the course „Machine learning and artificial intelligence“.

Oviedo, 16.09.2020. год



Dr Susana Irene Díaz Rodríguez,
Full Professor
University of Oviedo
Department of Computer Science

Департаман за рачунарске науке

Листа предавача из привреде (школска 2021/22. година)

дни у ој	Име и презиме	Звање	Предмет	Ниво студија / Студијски програм	Семестар	Фонд часова	Акредитационо оптерећење	Институција у којој са пуним радним временом
1.	Владан Тодоровић	Предавач ван радног односа	Безбедност информација	МАС Рачунарске науке	1. семестар	1 час предавања и 1 час аудиторних вежби	0.50+0.25+0.50 +0.25+0.08 =1.58	Advanced Security Technologies, Беогр:
			Вештачке неуронске мреже	МАС Рачунарске науке	2. семестар	1 час предавања и 1 час аудиторних вежби		
2.	Ненад Живић	Предавач ван радног односа	Машинско учење и вештачка интелигенција	МАС Рачунарске науке	1. семестар	2 часа предавања и 3 часа аудитор- них вежби	1.00+0.75+0.05 +0.17=1.97	Advertima, St. Galler Switzerland, огранак Београду, и Complete Genomics, Mountain View, CA, USA
			Примена вештачке интелигенције у биоинформатици	МАС Рачунарске науке	4. семестар	2 часа аудиторних вежби		
3.	Иван Живковић	Предавач ван радног односа	Обрада великих скупова података	МАС Рачунарске науке	2. семестар	1 час предавања и 2 часа ДОН	0.50+0.50+0.08 = 1.08	Accordia Group LLC, огранак у Нишу
4.	Младен Манчић	Предавач ван радног односа	Паралелно и дистри- буирано машинско учење	МАС Рачунарске науке	3. семестар	1 час предавања и 1 час аудиторних вежби	0.50+0.25+0.09 +0.17=1.01	Nordeus, Београд
			Обрада природних језика	МАС Рачунарске науке	4. семестар	4 часа аудиторних вежби		
5.	Сања Богдановић Динић	Предавач ван радног односа	Базе података	МАС Рачунарске науке	1. семестар	2 часа предавања и 3 часа ДОН	1.00+0.75+0.08 =1.83	НТЕС Београд, огранак у Нишу
6.	Владан Петковић	Предавач ван радног односа	Дизајн софтвера	МАС Рачунарске науке	1. семестар	2 часа ДОН	0.50+0.08=0.58	NIRI, Ниш

7.	Далибор Алексов	Предавач ван радног односа	Тестирање и метрика софтвера	МАС Рачунарске науке	2. семестар	4 часа аудиторних вежби	0.10+0.08=0.18	Nutanix, Београд
8.	Ђорђе Јанчић	Предавач ван радног односа	Развој мобилних апликација	МАС Рачунарске науке	3. семестар	2 часа аудиторних вежби	0.50+0.17=0.67	Peakstel, Ниш
9.	Душан Шарковић	Предавач ван радног односа	Интернет паметних уређаја	ОАС Рачунарске науке	5. семестар	2 часа аудиторних вежби	0.27	DMV doo, Ниш
10.	Елизабета Маркуш Митриновић	Предавач ван радног односа	Мултимедијални информациони системи	МАС Рачунарске науке	2. семестар	2 часа аудиторних вежби	0.50+0.08=0.58	Stankovićsoft, Ниш
11.	Божидар Игњатовић	Предавач ван радног односа	Управљање пројектима у ИТ	ОАС Рачунарске науке	6. семестар	1 час предавања и 2 часа аудиторних вежби	0.29+0.09=0.38	Vadin Soft, Ниш
12.	Ненад Ђорђевић	Предавач ван радног односа	Развој веб апликација	МАС Рачунарске науке	2. семестар	2 часа аудиторних вежби	0.50+0.08=0.58	Трохо доо, Ниш
13.	Ненад Илић	Предавач ван радног односа	Рачунарска графика 1	МАС Рачунарске науке	2. семестар	4 часа аудиторних вежби	0.10+0.10+0.17=0.37	Atomia, Ниш
			Рачунарска графика 2	МАС Рачунарске науке	4. семестар	4 часа аудиторних вежби		
14.	Александар Милинчић	Предавач ван радног односа	Технолошки практикум напредне обраде података	МАС Рачунарске науке	1. семестар	2 часа аудиторних вежби	0.13+0.08=0.21	RCMT Technologies, огранак у Нишу
15.	Иван Станковић	Предавач ван радног односа	Дигитална обрада слика	МАС Рачунарске науке	2. семестар	4 часа аудиторних вежби	0.21+0.08=0.29	SOLERA, Ниш
			Ненадгледано машинско учење	МАС Рачунарске науке	3. семестар	2 часа ДОН		
16.	Тамара Станковић	Предавач ван радног односа	Софтверске платформе и програмски језици за интелигентну обраду података	МАС Рачунарске науке	2. семестар	4 часа аудиторних вежби	1.00+0.21+0.17=1.38	Microsoft Serbia



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Co-funded by the
Erasmus+ Programme
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