Victoria LOPEZ
Curriculum Vitae
November, 2015

Professional data:

Address: Department of Computer Architecture and Automatics
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Education:

A.B. 1991   Complutense University of Madrid
Bachelor degree: Mathematics
Major: Computer Sciences

M.S. 2001   Polytechnic University of Madrid
Major: Computational Mathematics and Artificial Intelligence
Advisor: Professor Lorenzo J. Martín

Ph.D. 2004   Polytechnic University of Madrid
Major Cum Laude: Computational Mathematics and Artificial Intelligence
Advisor: Professor Lorenzo J. Martín
Thesis: "Design and Formal Verification of fuzzy algorithms in Tele-detection and Security"
Diploma 2014:   Massachusetts Institute of Technology, Challenges of Big Data, March-July 2014.
Other courses: Technical Essentials by Amazon Web Services, Madrid Jun 2015

Faculty & professional positions:

Faculty Positions at Complutense University of Madrid: (www.ucm.es)

2009 – Present: Associate Professor (full time), Faculty of Informatics, Computer Architecture department. Head of the research group G-TeC (www.tecnologiaUCM.es)
2006 – 2009: Assistant Professor (full time), Faculty of Informatics, Computer Architecture department.
2001 – 2006: Faculty part time Associate Professor at Statistics and Operative Research Department, Faculty of Mathematics

Faculty Positions at Nebrija University: (www.nebrija.es)

2003-2006 Full time Professor and Department head, Computer Science Department.

1999-2003 Faculty part time Associate Professor in Computer Science Department.

1992-2003 Manager and founder. Main activities were about software engineering, educational training and consulting.

1991-1992 LAN Supervisor (Banyan and Netware Networks). Main activities on software and hardware engineering and data administration.

2015 Publicity chair and scientific committee member at Progress in Informatics and Computing International Conference PIC 2015 (http://pic2015.njust.edu.cn/)

2015 Invited Speaker at 7th course on Networks and Big Data Science at Polytechnic University of Madrid, Cátedra Orange at ETSI Telecomunicaciones, Noviembre 2015, '**Some applications for Smartcity'**

Head of the course: '**Developing Projects on Big Data'** as part of the doctorate program on Math Engineering, Statistics and Operative Research, at Mathematics Faculty, Universidad Complutense de Madrid.

General Chair of the Hackathon Global Urban Data Fest Madrid Edition, March 2015, International competition for smart cities developers, makers and designers. Madrid Prado MediaLab, Spain. (http://www.global.datafest.net/cities/madrid-espana)

General Chair of the Amazon Web Service Public Sector Cloud Day at Facultad de Informática, Universidad Complutense de Madrid, Jun 2015.

2015 Invited Speaker, Facultad de Estudios Estadísticos, Universidad Complutense de Madrid. 13th January- Tittle: 'Open Data for Smartcity', (https://youtu.be/x9G_l-0rLIE)

2014 Invited Speaker, Fortune Time Institute, New York. August, 26th 2014. Tittle: '**Big and Open Data'.**

2014-Present: Advisory Editor at Journal of Fuzzy Mathematics. The Journal of Fuzzy Mathematics is Published quarterly by International Fuzzy Mathematics Institute, Los Angeles , California, USA.http://maths.swjtu.edu.cn/fuzzy/

2008-2014: Complutense Summer School. Director of several programs as follows:
"Dirección Comercial y Marketing" 7 Editions (2008 to 2014)
"Ingeniería y Calidad del Software" 1 Edition (2011)
"**Big and Open Data. Análisis y Programación con R**" (Editions 2014, 2015)

2014 Invited Speaker on EUNE Business School, **Conference on Big Data**, Seminarios Alianza del Pacífico. Nuevas Tecnologías e Innovación, Madrid, Spain.

2014 Invited Speaker on VI Foro Iberoamericano FIBED, 'La Tecnología al Servicio del Patrimonio', Madrid, Spain.

2014 Invited Speaker, Conference on Urban Waste Management and Hazardous, Consorcio Ciudad Universitaria, Madrid, Spain. ("Recyla.me & Recyclate! Apps on domestic waste recycling")

2014 Invited Speaker, International IEEE Conference on Progress in Informatics and Computers, PIC2014, Shanghai, China. ("**Big and Open Data: Challenges for Smartcity**").

2014 Invited Speaker, ICIST 2014 (4th International Conference on Information Systems and Technologies), Valencia (Spain) "**Big & Open Data: Challenges for Smartcity**"

2013 Invited Plenary Speaker, International Conference ConVision Empresarial, Sonora University, Hermosillo, Mexico ("**Big and Open Data: analytics and mobile technologies**")

2010-Present: Erasmus coordinator for Zagreb University (Croatia) and Halmstat University (Sweden).

2011-Present: Person in charge of Agreement collaboration program between Southwest Jiaotong University (Chengdu, China) and Complutense University (Madrid, Spain)

2011-Present: Person in charge of Agreement Collaboration Program between City of Madrid (Environment and Sustainability Government) and Complutense University (Madrid, Spain)

2011-2013: Docentia Committee Member at Autonoma University of Madrid (two full academic years).

2011-Present: Reviewer evaluator of International Doctoral Thesis for University of Technology Sydney, Australia.

2012: Member of the evaluation panel at FONCYT, Agencia Nacional de Promoción Científica y Tecnológica, Ministerio de Ciencia, Tecnología e Innovación Productiva (www.agencia.gov.ar) Argentina.

2012 and 2014: Project Evaluator at Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO http://www.fwo.be/Subsidiewijzer.aspx)

2010 Visiting Professor (July-September), Department of Electronics, City University of London, U.K.

2011 Visiting Professor (April) European Commission Program at Computer Science department, University of Zagreb, Croatia.

2010-Present: Program committee member and Steering Committee member of International Conference on Intelligent Systems and Knowledge Engineering (ISKE 2010, ISKE 2011, ISKE 2013 and ISKE 2014)

2010-Present: Program committee member and Steering Committee member of International Conference on Intelligent Systems and Knowledge Engineering (ISKE 2010, ISKE 2011, ISKE 2013 and ISKE 2014).

2010-Present: Program committee member and organizing committee member (Special Sessions Chair) of International Conference on Fuzzy Logic and Intelligent Technologies in Nuclear Science (FLINS 2010, FLINS 2012, FLINS 2014).

2009-Present: Active member of Instituto de Matemática Interdisciplinar, Complutense University, Spain (IMI http://www.mat.ucm.es/imi/)

2004-Present: Active member of Sociedad de Estadística e Investigación Operativa (SEIO http://www.seio.es)

2004-Present: Active member of CriptoRed Society (www.criptored.upm.es) at Polytechnique University, Madrid, Spain.

2010-Present: Active member of R-Hispano Society (http://r-es.org), Spain.

2006-Present: Reviewer of research articles at the following international journals and conferences:

- Elsevier Knowledge Based Systems (http://www.journals.elsevier.com/knowledge-based-systems, 5-year Impact Factor: 3.011)
- Elsevier Engineer Science and Technology (http://ees.elsevier.com/jestch/)
- International Conference on Fuzzy System and Data Mining(FSDM2015)
- International Conference on Intelligent Systems and Knowledge Engineering (ISKE 2010-2015)
- CISIS 2014: PC member
- ETM 4: PC member, author
- FLINS 2014: PC member, author
- PIC2014: PC member, author
- CISIS13: PC member
- ISKE2012: PC member, author, subreviewer
- ISKE2013: PC member, author
- Multiconference CAEPIA 2013: author, proceedings author
- IAS 2011: PC member
- FLINS2010: PC member, author
- ADT-2009: author, proceedings author
- ISKE2009: PC member, author

Published Articles:

Óscar Sánchez Becerro, Victoria López, Beatriz González-Pérez, "Performance improvement in the sequence alignment algorithms using dynamic libraries and multi-agent system". Proceedings SEIO 2015 XXXV Congreso Nacional de Estadística e Investigación Operativa, Pamplona, Spain, May, 2015

Óscar Sánchez Becerro, Victoria López, Beatriz González-Pérez. "Agentes Inteligentes en el alineamiento distribuido de secuencias en R". Proceedings V Jornadas de Usuarios de R, Santiago de Compostela, Spain, Oct. 2014,

V. López, R. Caro, B. González and G. Miñana, '**Big and Open Data: Applications in e-Government**', International Journal of E-Entrepreneurship and Innovation (IJEEI), July, 2015 In press.

David Reolid Roldán, Matilde Santos and Victoria López, "**Image Stabilization System Based on Minimization Frame Differences by a Fuzzy Logic Supervisor**" Eds. Ronei Marcos et al. Decision Making and Soft Computing, Proceedings of the 11th International FLINS Conference (FLINS 2014), pp. 436-441, World Scientific Ed., Brazil.

César Guevara, Matilde Santos and Victoria López, "**Training Strategy to improve the Efficiency of an Intelligent Detection System**" Eds. Ronei Marcos et al. Decision Making and Soft Computing, Proceedings of the 11th International FLINS Conference (FLINS 2014), pp. 544-549, World Scientific Ed., Brazil.

Andreas Muñoz, Matilde Santos and Victoria López, "**Design of Intelligent Control for HVAC System Using Fuzzy Logic**" Eds. Ronei Marcos et al. Decision Making and Soft Computing, Proceedings of the 11th International FLINS Conference (FLINS 2014), pp. 424-429, World Scientific Ed., Brazil.

José Manuel Velasco, Beatriz González-Pérez Guadalupe Miñana, Victoria López and Raquel Caro "**Analysing Spanish Daily Energy Demand by Programming a Graphical Implementation with R**" Eds. Ronei Marcos et al. Decision Making and Soft Computing, Proceedings of the 11th International FLINS Conference (FLINS 2014), pp. 460-465, World Scientific Ed., Brazil.

Ramón Soto C., M. Elena Robles-Baldenegro, Victoria López and Juan A. Camalich "**Mqdm: An Iterative Fuzzy Method for Group Decision Making**" Eds. Ronei Marcos et al. Decision Making and Soft Computing, Proceedings of the 11th International FLINS Conference (FLINS 2014), pp. 369-375, World Scientific Ed., Brazil.

J. A. Romera, Matilde Santos and Victoria Lopez, "**Hybrid Fuzzy-PID Control in a Thermo Solar Power Plant Condenser**", Proceedings of the 2014 IEEE International Conference on Progress in Informatics and Computing, ISBN: 978-4799-2033-4, pp. 641-650, Shanghai, China, May, 2014.

J. Manuel Velasco, Beatriz González-Pérez, Guadalupe Miñana, Victoria Lopez, Raquel Caro, "**An Explanatory Analysis of Electricity Prices within Day-Ahead Spanish Energy Market by Using a Graphical Automatization with R**", Proceedings of the 2014 IEEE International Conference on Progress in Informatics and Computing, ISBN: 978-4799-2033-4, pp. 631-638, Shanghai, China, May, 2014.

César Guevara, Matilde Santos, J.A. Martín & Victoria Lopez, "**Reaching a consensus on Access Detection by a Decision System**", Proceedings of the 2014 IEEE International Conference on Progress in Informatics and Computing, ISBN: 978-4799-2033-4, pp. 119-122, Shanghai, China, May, 2014.

Inmaculada Pardines, Victoria Lopez, A. Sanmartin, M. Octavio, C.Fernandez, '**Collaborative Recommendation System for Environmental Activities Management Mobile Application'**, Advances in Intelligent Systems and Computing, Practical Applications of Intelligent Systems, DOI: 10.1007/679-3-642-54927-4, Springer-Verlag, Berlin, Heidelberg, 2014

Fernando Turrado García, Luis Javier García Villalba and Victoria Lopez, '**Softcomputing applied to the supply chain Management: A Method for Daily Sales Classification and Forecasting**' Z. Wen and T. Li (eds.), Practical Application of Intelligent Systems, Advances in Intelligent Systems and Computing 279, DOI: 10.1007/978-3-642-54927-4_37, pp. 391-396, Springer-Verlag Berlin Heidelberg 2014

Victoria Lopez, Guadalupe Miñana, Juan Tejada and Raquel Caro, '**Benchmarking for Stability Evaluation of Computer Systems**' F. Sun et al. (eds.), Knowledge Engineering and Management, Advances in Intelligent Systems and Computing 214, DOI: 10.1007/978-3-642-37832-4_46, pp. 509-517, Springer-Verlag Berlin Heidelberg 2014

Guadalupe Miñana, Victoria Lopez, and Juan Tejada, '**Recycla.me: Technologies for Domestic Recycling**' F. Sun et al. (eds.), Foundations and Applications of Intelligent Systems, Advances in Intelligent Systems and Computing 213, DOI: 10.1007/978-3-642-37829-4_53, pp. 631-640, Springer-Verlag Berlin Heidelberg 2014

Luis Garmendia, Ramón González del Campo and Victoria Lopez, '**Lee's Theorem Extension for IVFRs Similarities**' F. Sun et al. (eds.), Knowledge Engineering and Management, Advances in Intelligent Systems and Computing 214, DOI: 10.1007/978-3-642-37832-4_44, pp. 485-493, Springer-Verlag Berlin Heidelberg 2014

César Guevara, Matilde Santos and Victoria López, '**Data Leake Detection Algorithm Based on Sequences of Activities**'. Lecture Notes in Computer Science 8688, Proceedings of the International Symposium RAID 2014, pp. 477-478, Springer Ed., Gothenburg, Sweden.

Inmaculada Pardines, Victoria López, **Analyzing the routing problem: Shop&Go, a smartphone solution to minimize the shopping time**, Science in China, Series F: Information Science, Springer, Vol 56, No 11, ISSN 1674-733X, DOI: 10.1007/s11432-013-5013-4, pp. 110104:1-110104:12, (November 2013)

Victoria López, Guadalupe Miñana, **Modeling the stability of a computer system**, International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems Vol. 20, Suppl. 1 (June 2012) 81−90, World Scientific Publishing Company, DOI: 10.1142/S0218488512400065

Matilde Santos, José Antonio Martín H., Victoria López, Guillermo Botella, **Dyna-H: A heuristic planning reinforcement learning algorithm applied to role-playing game strategy decision systems**, Knowledge-Based Systems 32 (2012) 28–36

Victoria López, **Probability and Statistics** (full entry), Encyclopedia Springer 2013, ISBN 978-1-4020-8264-1, Runehov, Anne; Oviedo, Lluis (Eds.), 2013

Raquel Caro, Victoria López y Guadalupe Miñana**. La ingeniería de fiabilidad de sistemas informáticos a través de EMSI**, Revista Elementos, Editorial Politécnico Grancolombiano, 2012.

Matilde Santos and Victoria López, **Fuzzy Decision System for Safety on Roads**, J. Lu, L.C. Jain, and G. Zhang: Handbook on Decision Making, ISRL 33, pp. 171–187. Springer-Verlag Berlin Heidelberg, 2012

Victoria López, **Formal Engineering with Fuzzy Logic**, Advances in Intelligent and Soft Computing, pp: 643-652, ISSN 1867-5662 DOI 10.1007/978-3-642-25661-5 (Springer, 2011)

Victoria López, Matilde Santos, Toribio Rodríguez, **An Approach to the Analysis of Performance, Reliability and Risk in Computer Systems**, Advances in Intelligent and Soft Computing, pp: 653-658, ISSN 1867-5662 DOI 10.1007/978-3-642-25661-5 (Springer, 2011)

Gonzalo Farias; Matilde Santos; Victoria López, **Making decisions on brain tumour diagnosis by soft computing techniques**, Soft Computing (2010) ISSN: 1432-7643 (Print) 1433-7479 (Online)

Victoria López, Javier Montero, Luis Garmendia, Germano Resconi, **Specification and Computing States in Fuzzy Algorithms**, International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, ISSN: 0218-4885 (Print) 1793-6411 (Online) DOI: 10.1142/S0218488508005303, Vol. 16 (3). pp. 301 – 336 June 2008

Victoria López, Javier Montero, **Formal Specification under Fuzzyness**, Journal of Multiple-Valued Logic and Soft Computing, ISSN: 1542-3980 (print) ISSN: 1542-3999 (online) pp. 229-251, Vol 15, Numbers 2-3, 2009

J. Tinguaro Rodríguez, Victoria López, Daniel Gómez, Begoña Vitoriano, Javier Montero, **A computational definition of aggregation rules**, Proceedings IEEE WCCI-FUZZIEEE'10 pp. 33 - 37 (2010) DOI: 10.1109/FUZZY.2010.5584166

Victoria López, Matilde Santos, Javier Montero, **Fuzzy Specification in real estate market decision making**, Int. Journal of Computational Intelligence Systems, ISSN: 1875-6891 / 1875-68833(1). pp. 8 – 20 ATLANTIS PRESS (2010)

Claudia M. Álvarez; Matilde Santos; Victoria López, **Reinforcement learning vs. A* in a role playing game benchmark scenario**, Computational Intelligence, Foundations and Applications ISBN: 978-981-4324-69-4 pp. 644 - 650 WORLD SCIENTIFIC (2010)

Laura Valverde, Matilde Santos, Victoria López, **Fuzzy decision system for safety on roads**, World Scientific Proceedings Series on Computer, Engineering and Information Science, Vol. 2 (Intelligent Decision Making Systems) pp: 326 - 331, Isbn: 13-978-981-4295-05-5 WORLD SCIENTIFIC (2009)

Victoria López, Matilde Santos, Javier Montero, **Improving reliability and performance in computer systems by means of fuzzy specifications**, World Scientific Proceedings Series on Computer, Engineering and Information Science, Vol. 2 (Intelligent Decision Making Systems) pp: 351 - 356, Isbn: 13-978-981-4295-05-5 WORLD SCIENTIFIC (2009)

Germán P. Santos, Luis Garmendia, Rubén S. Montero, Victoria López, **Fuzzy System to Evaluate Resources' Reliability in a Grid Environment**, World Scientific Proceedings Series on Computer, Engineering and Information Science, Vol. 2 (Intelligent Decision Making Systems) pp: 357- 362, Isbn: 13-978-981-4295-05-5, WORLD SCIENTIFIC (2009)

Victoria López, José Miguel Cleva, Javier Montero, **A functional tool for fuzzy first order logic evaluation, Applied Artificial Intelligence**. DOI No:10.1142/9789812774118_0007 pp.: 19-26 WORLD SCIENTIFIC (2006)

J. Tinguaro Rodríguez, Javier Montero, Begoña Vitoriano, Victoria López, **An Inductive Methodology for Data-Based Rules** Building, Lecture Notes In Artificial Intelligence: Algorithmic Decision Theory DOI: 10.1007/978-3-642-04428-1_37Volume 5783/2009, pp. 424-433,SPRINGER (2009)

Claudia Barenco, Javier García-Villalba, Victoria López, **Implementation and Attacks Analysis of a Honeypot**, Lecture Notes in Computer Science: Computational Science and its Applications DOI: 10.1007/978-3-540-74477- Volume 4706/2007, pp. 489-502 SPRINGER-VERLAG (2007)

Luis Garmendia, Ramón González , Jordi Recasens, Victoria López, **An Algorithm to Compute the Transitive Closure, a Transitive Approximation and a Transitive Opening of a Fuzzy Proximity,** Mathware & Soft Computing ISSN: 1134-5632,Vol. 16 pp. 175-191 (2009)

Javier Montero, Victoria López, Daniel Gómez, **The Role of Fuzziness in Decision Making,** Studies in Fuzziness and Soft Computing.Fuzzy Logic: A Spectrum of Theoretical and Practical Issues, ISSN: 1434-9922 ISBN: 978-3-540-71257-2 pp. 337-350 (2007), Springer

Jorge Cordero, Jorge Martínez, Oscar Sánchez, Victoria López, Beatriz González, **BioSeq: Una librería R para el análisis de secuencias de datos**, Actas CAEPIA (Conferencia de la Asociación Española para la Inteligencia Artificial), congreso CEDI 2013, pp. 919-928, ISBN: 978-84-695-8348-7 (2013)

Antonio Domínguez, Juan Íñigo, Miguel Morat, Victoria López, Rubén Fuentes, **Modelado de Ludus Manager con Lógica Fuzzy**, Actas CAEPIA (Conferencia de la Asociación Española para la Inteligencia Artificial), congreso CEDI 2013, pp. 929-938, ISBN: 978-84-695-8348-7 (2013)

Inmaculada Pardines, Victoria López, **Sistema de Recomendación Colaborativo de Hábitat Madrid**, Actas CAEPIA (Conferencia de la Asociación Española para la Inteligencia Artificial), congreso CEDI 2013, pp. 969-978, ISBN: 978-84-695-8348-7 (2013)

Ricardo Pragnell, Miguel Gutierrez, Víctor Ortiz, Alejandro Peñalver, Victoria López, **ANMV: Augmented Navigation and Virtual Mapping,** Actas CAEPIA (Conferencia de la Asociación Española para la Inteligencia Artificial), congreso CEDI 2013, pp. 1009-1017, ISBN: 978-84-695-8348-7 (2013)

Inmaculada Pardines and Victoria Lopez, Shop&Go: **The Routing Problem Applied to the Shopping List on Smartphones**, Proceedings of the 7th International Conference on Intelligent Systems and Knowledge Engineering, pp: 237- 248, ISSN 2194-5357, DOI 10.1007/978-3-642-37832-4 (2012)

Beatriz González-Pérez, Victoria López and Juan Sampedro, **Programming Global and Local Sequence Alignment by Using R**, Proceedings of the 7th International Conference on Intelligent Systems and Knowledge Engineering, pp: 341- 352, ISSN 2194-5357, DOI 10.1007/978-3-642-37832-4 (2012)

Raquel Caro, Victoria López, Jorge Martínez, Guadalupe Miñana, **Reliability and Quality in the Area of Statistical Thinking in Engineering,** Proceedings of the 7th International Conference on Intelligent Systems and Knowledge Engineering, pp: 353- 364, ISSN 2194-5357, DOI 10.1007/978-3-642-37832-4 (2012)

Victoria López Guadalupe Miñana, Juan Tejada, Raquel Caro, **Benchmarking for Stability Evaluation of Computer Systems,** Proceedings of the 7th International Conference on Intelligent Systems and Knowledge Engineering, pp: 509- 518, ISSN 2194-5357, DOI 10.1007/978-3-642-37832-4 (2012)

Victoria López, Guadalupe Miñana. **Load Average Forecast: A new monitor to analyze instability in computer systems,** Uncertainty Model in Knowledge Engineering and Decision Making, Proceedings of the 10th International FLINS Conference, pp. 1045-1050, World Scientific, ISBN: 978-981-4417-73-0 (2012)

Victoria López, Guadalupe Miñana, Matilde Santos, Toribio Rodríguez, **An aproach to the analysis of performance, reliability and risk in computer systems**, Encuentro FuzzyMad 2011, Facultad de Matemáticas, UCM (Póster)

R. González Del Campo, L. Garmendia, V. López, **Lee's Theorem Extension For Interval Valued Fuzzy Similarities**, Encuentro FuzzyMAD 2012, Facultad de Matemáticas, UCM (Poster)

L. Garmendia, V. López And V. Estevez, **Measuring Landscapes Quality Using Fuzzy Logic And Gis**, Encuentro FuzzyMAD 2012, Facultad de Matemáticas, UCM (Poster)

Raquel Caro, Beatriz González, Victoria López, Jorge Martínez, Guadalupe Miñana, Juan Tejada, **Intercampus 2.0: Transferencia De Contenidos Entre Plataformas E-Learning**, VII Jornada Campus Virtual UCM, Madrid, 2012 (Poster)

Beatriz González-Pérez, Victoria López and Juan Sampedro, **Programming Global and Local Sequence Alignment by using R**, IV Jornadas de Usuarios de R, Barcelona, 2012 (Poster)

V. López, M. Baez, J. Rodríquez de LLera, D. Sanz, M. Saucedo, P. Torralbo, A. Zapata, J. Tejada, G. Miñana Ropero, A. Borrego, J. Cordero, L. Cruz, M. González, F. Hernández, D. Palomero, **Aplicaciones de la Estadística y la I.O. a las tecnologías móviles**, XXXIII Congreso SEIO 2012 (Poster)

Victoria López, Guadalupe Miñana, Inmaculada Pardines, Jesús Escribano, Juan Tejada, **Aplicaciones de la Investigación Operativa en desarrollo de Apps sobre Medio Ambiente, Movilidad y Sociedad**, XXXIV Congreso SEIO 2013 (Poster)

Rocio Colina, Beatriz Municio, Inés Gómez-Chacón, Victoria Lopez, **QMR: Modeling quality mobility routes under uncertainty**, XXXIV Congreso SEIO 2013 (Poster)

Hugo Marrao, Victoria Lopez, Raquel Caro, Guadalupe Miñana, **Modeling and forecasting prices in electricity Spanish markets under uncertainty**, XXXIV Congreso SEIO 2013 (Poster)

Claudia M. Álvarez, Matilde Santos, Victoria López, **Reinforcement learning vs. A* in a role playing game benchmark scenario**, International FLINS Conference on Computational Intelligence, World Scientific Proceedings Series on Computer Engineering and Information Science, Vol. 4 (Fundations and Applications) pp: 644-650, Isbn:13-978-981-4324-69-4, 2010, Chengdu, China.

Matilde Santos, J. Antonio Martín y Victoria López, **Developing computational tools for the portability of information in different virtual systems,** International Technology, Education and Development Conference INTED Conference Proceedings of INTED 2010, pp. 5434-5442, Valencia, Spain

Victoria López, Javier Montero y Tinguaro Rodríguez**, Formal Specification and Implementation of Computational Aggregation Functions**, International FLINS Conference on Computational

Intelligence, World Scientific Proceedings Series on Computer Engineering and Information Science, Vol. 4 (Fundations and Applications) pp: 523-528, Isbn:13-978-981-4324-69-4, 2010, Chengdu, China.

Matilde Santos, Victoria López y J. Antonio Martín, **Designing data bases for improving the quality of teaching material,** International Technology, Education and Development Conference INTED, Conference Proceedings of INTED 2010, pp. 5408-5415 IATED, Valencia, Spain.

Pablo Esteve, David Roldán, Juan C. de Mendoza, Victoria López, **E-learning Migration: Un recomendador de plataformas,** Congreso Español de Informática CEDI 2010, Actas del III Simposio sobre Lógica Fuzzy y Soft Computing LFSC2010 (EUSFLAT), proceedings CEDI 2010, pp.: 303-310, ISBN: 978-84-92812-65-3, Valencia, Spain

Daniel Alonso, Matilde Santos, Victoria López, **Control de trenes basado en lógica borrosa: una aplicación didáctica**, Congreso Español de Informática CEDI 2010, Actas del III Simposio sobre Lógica Fuzzy y Soft Computing, LFSC2010 (EUSFLAT), proceedings CEDI 2010, pp.: 273-279, ISBN: 978-84-92812-65-3, Valencia, Spain.

Jorge Caballero, Pablo Jimeno, Raúl Ortega, Victoria López, **Uso de técnicas Soft Computing en el análisis de consumo de Marcas de Distribuidor**, Congreso Español de Informática CEDI 2010 Actas del III Simposio sobre Lógica Fuzzy y Soft Computing LFSC2010 (EUSFLAT), incluido en el CEDI 2010, pp.:319-326, ISBN: 978-84-92812-65-3, Valencia, Spain

Marcos Alvarez, Jesús de Lara, Célia Padellano, Victoria López, **Análisis de garantías bajo incertidumbre con EMSI,** Congreso Español de Informática CEDI 2010, Actas del III Simposio sobre Lógica Fuzzy y Soft Computing LFSC2010 (EUSFLAT), incluido en el CEDI 2010, pp.:326-333, ISBN: 978-84-92812-65-3, Valencia, Spain

Célia Padellano, Marcos Alvarez, Jesús de Lara, Victoria López, **Evaluación del rendimiento y fiabilidad de sistemas informáticos**, Congreso Nacional de Estadística e Investigación Operativa Actas del XXXII Congreso Nacional de Estadística e Investigación Operativa, Ponencia número 61. ISBN: 978-84-693-6152-8, 2010, A Coruña, Spain

Jorge Caballero, Pablo Jimeno, Raúl Ortega, Victoria López, **Herramienta de análisis de consumo de marcas de distribuidor en España**, Congreso Nacional de Estadística e Investigación Operativa, Actas del XXXII Congreso Nacional de Estadística e Investigación Operativa, Comunicación nº: 368. ISBN: 978-84-693-6152-8, 2010 A Coruña, Spain

Victoria López, Matilde Santos, Pablo Esteve, David Roldán, Juan C. de Mendoza, **Practical applications of intelligent systems: an E-learning platforms recommender**, 2010 IEEE International Conference on Intelligence Systems and Knowledge Engineering, Proceedings de la IV International Conference on Intelligence Systems and Knowledge Engineering (ISKE 2010), Hangzhou, China

Matilde Santos, Victoria López, Francisco Morata, **Intelligent Fuzzy Controler of a Quadrotor**, 2010 IEEE International Conference on Intelligence Systems and Knowledge Engineering, Proceedings de la IV International Conference on Intelligence Systems and Knowledge Engineering (ISKE 2010), Hangzhou, China

Ramón González del Campo, Luis Garmendia, Victoria López, **Specificity For Interval-Valued Fuzzy Sets Using Aggregation Operators,** XV Congreso Español sobre Tecnologías y Lógica Fuzzy (ESTYLF 2010), Proceedings del congreso ESTYLF 2010, pp: 321-324, ISBN: 978-84-92944-02-6, Huelva, Spain

Javier Montero, Daniel Gómez, Victoria López, Tinguaro Rodríguez, Begoña Vitoriano,

Sobre funciones y reglas de agregación, XV Congreso Español sobre Tecnologías y Lógica Fuzzy (ESTYLF 2010), Proceedings del congreso ESTYLF 2010, pp: 303-308, ISBN: 978-84-92944-02-6, Huelva, Spain

Tinguaro Rodríguez, Victoria López, Javier Montero, Begoña Vitoriano, **A methodology for building fuzzy rules from data,** EUROFUSE 2009, Pamplona, Spain.

Luis Garmendia, Ramón González, Victoria López, **Transitive Closure of Interval-valued Relations**, 3rd International Conference on Intelligent Systems and Knowledge Engineering, Proceedings 2008 3th International Conference on Intelligent Systems and Knowledge Engineering, pp.: 1393-1397, ISBN: 978-1-4244-2196-1, IEEE PRESS, Xiamen, China

Victoria López, Javier Montero, **REV: Valuation and price adjustment in a fuzzy logic framework**, International Conference on Intelligent Systems and Knowledge Engineering Proceedings 2008 3th International Conference on Intelligent Systems and Knowledge Engineering, pp.: 640-645, ISBN: 978-1-4244-2196-1, IEEE PRESS, Xiamen, China

Gonzalo Farias, Matilde Santos, Victoria López, **Brain Tumour Diagnosis with Wavelets and Support Vector Machines**, International Conference On Intelligent Systems And Knowledge Engineering, Proceedings 2008 3th International Conference on Intelligent Systems and Knowledge Engineering, pp. 1453-1459, ISBN: 978-1-4244-2196-1, IEEE PRESS, Xiamen, China

Matilde Santos, Victoria López, Luis Garmendia, **Modelado Difuso de un sistema físico**, XIV Congreso Español sobre Tecnologías y Lógica Fuzzy (ESTYLF 2008) Actas del Congreso pp.: 197-202, ISBN: 978-84-691-5807-4, 2008 Mieres, Asturias

Victoria López, Javier Montero, **Fuzzy logic for formal specification of systems**, IADIS International Conference ISA 2008 (part of MCCSIS 2008), Proceedings IADIS Conference, pp.: 215-218, ISBN: 978-972-8924-60-7, Ámsterdam, The Netherlands

Victoria López, Álvaro del Monte, Javier Montero, **Fuzzy Logic in Real Estate Valuation**, International FLINS Conference on Computational Intelligence, World Scientific Proceedings Series on Computer Engineering and Information Science, Vol. 1 (Computational Intelligence in Decision and Control) pp.: 1021-1.268, ISBN:13-978-981-279-946-3, Madrid, Spain

Victoria López, Javier Montero, **Análisis de requisitos difusos en valoración de inmuebles**, Congreso Español de Informática CEDI 2007 Actas del II Simposio sobre Lógica Fuzzy y Soft Computing, LFSC2007 (EUSFLAT), incluido en el CEDI 2007, Págs.:181-188, ISBN: 978-84-9732-609-4, Zaragoza, Spain

Victoria López, Javier Montero, **Fuzzy specification in software engineering**, Join Conferences on Information Sciences (JCIS, 2007), Proceedings of the International Conference on Fuzzy Theory and Technology, pp.: 1377-1383,DOI No:10.1142/9789812709677_0196, Salt Lake City, USA.

Luis Garmendia, Adela Salvador, Victoria López, **Classifying Fuzzy Measures**, III International Conference on Modeling Decisions for Artificial Intelligence, Proceedings MDAI 2006, ISBN: 978-84-00-08415-2 2006 Tarragona, Spain

Victoria López, Javier Montero, Daniel Gómez, **Fuzzy weakest precondition and fuzzy invariants**, Join Conferences on Information Sciences (JCIS, 2005), Proceedings of the International Conference on Fuzzy Theory and Technology, ISBN: 0-9707890-3-3, 2005 Salt Lake City, USA

Victoria López, Daniel Gómez, Javier Montero, **Verificación de algoritmos de clasificación con precondición difusa**, XIV Congreso Español sobre Tecnologías y Lógica Fuzzy (ESTYLF 2004) Actas del Congreso PP.: 437-442, ISBN: 978-84-609-2160-3, Jaén, Spain

Victoria López, Lorenzo Martín, **Coloreado de grafos difusos: Verificación formal y comprobación práctica con Maple**, XIV Congreso Español sobre Tecnologías y Lógica Fuzzy (ESTYLF 2004) Actas del Congreso PP.: 437-442, ISBN: 978-84-609-2160-3, Jaén, Spain
Victoria López, Lorenzo Martín, Coloreado de grafos difusos en teledetección, I Encuentro de Computación Simbólica en la UPM, Actas del Encuentro pp.: 85-100, ISBN: 978-84-88760-13-2, Madrid, Spain

Researching Projects

- ## As Project Head:

Title: Evaluación del Proyecto MOBIRE 2013 (Dic. 2014-May 2015 -6 months)
Reference: Art. 83-LOU-UCM **Exp AENOR: 2014/670/PIDI/03**
Institutions and industry: Complutense University (Spain), Asociación Española de Normalización y Certificación AENOR
Figures: Private

Title: Desarrollo de Proyectos Big Data (April. 2015-May 2015 -2 months)
Reference: Art. 83-LOU-UCM
Institutions and industry: Complutense University (Spain), MEDIA PLANNING GROUP, SAU.
Figures: Private

Title: Predicción de Crisis en el Trastorno Bipolar (PCTAB) (July 2015- present)
Reference: Art. 83 LOU - UCM
Institutions and industry: Orden Hospitalaria San Juan de Dios, Universidad Complutense de Madrid
Figures: In process

Title: *OMUS14-* Theoretical Models on Optimization and Management of Utility Services (Water, Electricity and Waste Recycling and Reduction) (5 years: 2014-2018)
Reference: in construction under European projects Horizonte 2020
Institutions and industry: Complutense University (Spain), Southwest Jiaotong University (China), Sonora University (Mexico), Ekergy, S.L.
Figures: In process

Title: 'Mobile Technologies and Open Data Systems for City of Madrid' (3 years: 2013/2014/2015)
Reference: Specific Cooperation agreement Government of Madrid and Complutense University
Institutions and industry: G-TeC research team, Complutense University, IAM (Informatics City of Madrid) and Environmental and Mobility department City of Madrid) in cooperation with the European project STARS de LEP (London European Partnership for Transport) y London Council
Figures: not available.

Title: 'Sistema de Gestión de Firmes para Infraestructuras Lineales' (2006/2007/2008)
Reference: Ministerio de Industria, T. y C. de España, CDTI- PIC- IDI-2006-0453,
Institutions and industry: Itinere, S.A., Cedex, S.A and Nebrija University;
Figures: 409.850€ founding + 659.686€ credit.

- ## As Project Member:

Title: Spectra city, Smart Personal Carbonless Transport in the City (July 2015- present)
Reference: Art. 83 LOU - UCM
Institutions and industry: AYESA ADVANCED TECHNOLOGIES S.A. and Universidad Complutense de Madrid
Supervisor: Prof. Dr. Juan Pavón Mestras

Title: 'Construcción de sistemas de ayuda a la decisión con incertidumbre lingüística' (2010-2012), Header Prof. Montero, F. J.
Reference: Ministerio de Ciencia e Innovación. TIN2009-07901
Institutions: Complutense University;
Figures: *147.400€*

Title: 'Modelos de Representación, Agregación y Clasificación para la Toma de Decisiones con Información Imprecisa' (2006-2009), Header Prof. Montero, F. J.
Reference: Ministerio de Educación y Ciencia. TIN2006-06190
Institutions: Complutense University;
Figures: *51.800€*

Title: 'Sistemas de ayuda a la decisión con preferencias valoradas' (2002-2005), Header Prof. Montero, F. J.
Reference: Ministerio de Educación y Ciencia. BFM2002-00281
Institutions: Complutense University;
Figures: *33.900€*

Title: 'Sistemas de clasificación borrosa para la toma de decisiones basados en modelos operacionales de agregación' (2005-2006), Header Prof. Montero, F. J.
Reference: Ministerio de Educación y Ciencia. MTM2005-08982-C04-01
Institutions: Complutense University;
Figures: *8.000€*

Title: 'Aspectos de seguridad en protocolos de capa de enlace (2005-2006), Header Prof. Garcia-Villalba, J.
Reference: Ministerio de Educación y Ciencia. TSI2005-00986
Institutions: Complutense University;
Figures: *12.000€*

Title: 'Red temática nacional de procesos de toma de decisiones: modelado de preferencias, agregación y aplicaciones (REDEMAP-II), (2005-2006) Header Prof. Herrera-Viedma, E.
Reference: Ministerio de Ciencia y Tecnología. TIN2004-21700-E
Institutions: Spanish Universities in Redemap;
Figures: *12.000€*

Title: 'Sistemas de ayuda para la toma de decisiones' (2006), Header Prof. Montero, F. J.
Reference: Comunidad Autónoma de Madrid CAM-UCM- GR45/05
Institutions: Complutense University;
Figures: *7.920€*

Title: 'Sistemas de ayuda a la decisión y resolución de conflictos' (2008), Header Prof. Montero, F. J.
Reference: Comunidad Autónoma de Madrid CAM-UCM- GR74/07
Institutions: Universidad Complutense y Grupo Santander
Figures: *7.920€*

Ph.D. Theses, BA/MA/MS Theses Supervised or Supervising:

(Ph. D. Theses) 'DESARROLLO DE SISTEMAS EXPERTOS CON PROGRAMACIÓN FUNCIONAL Y TECNOLOGÍAS BIG DATA' by GABRIEL VALVERDE CASTILLA (2015, supervision in join to Prof. Beatriz Pérez-González)

(Ph. D. Theses) 'TÉCNICAS DE OPTIMIZACIÓN Y BIG DATA EN BIOINFORMÁTICA CON APLICACIONES EN CIENCIAS SOCIALES Y DE LA SALUD' by OSCAR SANCHEZ BECERRO (2015, supervision in join to Prof. Beatriz Pérez-González)

(Ph. D. Theses) 'Performance and reliability of computer systems in solving problems in the field of Bioinformatics and Biostatistics' by ESLAM MONTASER ROUSHDI ALI (2015, supervision in join to Prof. Beatriz Pérez-González)

(Ph. D. Theses) 'Análisis del binomio fiabilidad-rendimiento para optimización de sistemas informáticos' by Toribio Rodríguez (2014, supervision in join to Prof. Matilde Santos)

(Master Theses) 'Aplicaciones de Bioestadística y Bioinformática con R'(Master Ingeniería Matemática) by Juan Sampedro Ruíz, Sept 2012, supervised join to Prof. Beatriz Pérez-González)

(Master Theses) 'Bases de datos en R. Análisis gráfico y estadístico de valores atípicos y ausentes' by Jorge Cordero, (Master in Informatics Research) Septiembre 2013 (supervised in join to Prof. Beatriz Pérez-González)

(Master Theses) 'BioSeq: Una librería para Bioinformática en R'(Master in Informatics Research) by Jorge Martínez Ladrón de Guevara, June 2013, (supervised in join to Prof. Beatriz Pérez-González)

(Master Theses) 'Algoritmos de Programación Dinámica con R para resolver problemas de alineamientos de secuencias''(Master in Informatics Research) by Oscar Sánchez, February 2014, (supervised in join to Prof. Beatriz Pérez-González)

(BA/MA Theses) 'WAP Madrid: Red Social Walking People'. http://eprints.ucm.es/, July 2015 (V. López and G. Miñana)

(BA/MA Theses) 'ForMMulary: Sistema Informático para ayudar a la terapia de mamíferos marinos. http://eprints.ucm.es/, July 2015 (G. Miñana and V. López)

(BA/MA Theses) 'Sistemas Open Data: Aplicaciones para Medioambiente'. http://eprints.ucm.es/26503/, July 2014 (V. López and I. Pardines)

(BA/MA Theses) 'Calidad del software en tecnologías móviles : adaptación y actualización de aplicaciones móviles a los estándares de calidad del Ayuntamiento de Madrid' http://eprints.ucm.es/26492/ July 2014 (I. Pardines y V. López)

(BA/MA Theses) 'Rutas seguras en la ciudad para discapacitados psíquicos' July, 2014 (V. López y J. Escribano)

(BA/MA Theses) 'MyConference: Sistema Informático para la Configuración de Congresos y Eventos Profesionales' http://eprints.ucm.es/26530/, July 2014 (G. Miñana y V. López)

(BA/MA Theses) 'Recycla.te: una aplicación para reciclar, reutilizar y reducir materiales en Madrid' (http://eprints.ucm.es/22477), July 2013, in cooperation with the City of Madrid

(BA/MA Theses) 'Hábitat Madrid: Aplicación móvil para escuelas de educación ambiental del Ayuntamiento de Madrid ' (http://eprints.ucm.es/22472), July 2013, in cooperation with the City of Madrid

(BA/MA Theses) 'Mapa de recursos en la ciudad de Madrid: accesibilidad integral para el ciudadano' (http://eprints.ucm.es/22568), July 2013, in cooperation with the City of Madrid

(BA/MA Theses) 'Aplicación móvil itinerarios guiados Parque del Retiro' (http://eprints.ucm.es/22581), July 2013, in cooperation with the City of Madrid

(BA/MA Theses) 'Camino Seguro al Cole' (http://eprints.ucm.es/22616), July 2013, in cooperation with the City of Madrid

(BA/MA Theses) 'Recycla.me: Aplicación Android para enseñar a reciclar a niños de 7 a 11 años' (http://eprints.ucm.es/15912/), July 2012, in cooperation with the City of Madrid. This project has got two prizes: Frist Sopra award 2012 and Special Mention eMadrid 2013.

(BA/MA Theses) 'ANVM-Mobile App' (http://eprints.ucm.es/22586), July 2013.

(BA/MA Theses) 'Ludus Manager' (http://eprints.ucm.es/22461), July 2013.

(BA/MA Theses) 'LocalyZA: Aplicación Android para localizar contactos en grandes eventos ' (http://eprints.ucm.es/16057/), July 2012.

(BA/MA Theses) 'SocialSport: Red social deportiva para Android' (http://eprints.ucm.es/16090/), July 2012.

(BA/MA Theses) 'CGTel: Una aplicación Android para control de gasto telefónico individual y grupal ' (http://eprints.ucm.es/16088/), July 2012.

(BA/MA Theses) 'Shop & Go: aplicación móvil Android para optimización de rutas en supermercados ' (http://eprints.ucm.es/13049/), July 2011.

(BA/MA Theses) 'Portal Web de la Cátedra Miguel de Guzmán ' (http://eprints.ucm.es/9440/), July 2009.
(BA/MA Theses) 'Análisis del rendimiento y fiabilidad de los sistemas informáticos' (http://eprints.ucm.es/11265/) July 2010.

(BA/MA Theses) 'Sistema de Análisis de Encuestas de Marcas de Distribuidor ' (http://eprints.ucm.es/11299/), July 2010.

(BA/MA Theses) 'E-learning Management Tools ' (http://eprints.ucm.es/11280/), July 2010.

(BA/MA Theses) 'Optimización de Rutas en Camino Seguro al Cole. Construcción de rutas con medios de transporte alternativos ' (Mathematics Engineering BA), by Beatriz Municio, July 2013.

(BA/MA Theses) 'Optimización de rutas en 'Camino Seguro al Cole'. Construcción y evaluación de rutas seguras ' (Mathematics Engineering BA), by Rocio Colina, July 2013.

Awards:

- *Best Poster International FLINS Conference 2010, Chengdu, China.*
- *Best Poster International ISKE Conference 2009, Hasselt, Belgium.*
- *Best Poster International ISKE Conference 2008, Xiamen, China.*
- *Second best Poster International FLINS Conference 2008, Madrid, Spain.*
- *Best SOPRA project 2012 Madrid, Spain*
- *Special Mention E-Madrid 2013 project, Madrid, Spain*

Teaching:

2006- Present: Computer Architecture Department, Faculty of Informatics, Complutense University:
- Bioinformatics, Master of Researching in Informatics.
- Informatics Auditory, Informatics Engineering Degree (third year)
- Computer Fundamentals and Labs, Informatics Engineering Degree (first year)
- Performance & Reliability of Computer Systems, Informatics Engineering Degree (last year)
- Computer Systems BA and MA Projects

2001-2006: Statistics and Operation Research Department, Faculty of Mathematics, Complutense University:
- Math Programming, B.A of Mathematics
- Probability and Statistics, B. A. of Mathematics
- Combinatorial Optimization and Algorithms, B. A. of Mathematics
- Operation Research, B. A. of Mathematics

2004-2006: Computer Science Department, School of Engineering, Nebrija University:
- Automata Theory and Formal Languages, Informatics Engineering Degree
- Discrete Mathematics and Logic, Informatics Engineering Degree
- Software Engineering, Informatics Engineering Degree

2000-2001: Statistic and O. R. Department, Faculty of Statistics, Complutense University of Madrid.
- Operation Research, B. A. of Statistics.

1999-2003: Mathematics &Computer Science Department, School of Engineering, Saint Louis University (Madrid Campus):
- Discrete Mathematics, Informatics Engineering Degree
- Mathematical Logic, Informatics Engineering Degree
- Data Structures and Algorithms, Informatics Engineering Degree

Innovation Teaching Projects:

Título: Aprendizaje mediante el desarrollo de una actividad colaborativa entre estudiantes de veterinaria y de informática: desarrollo de la app "Formulario terapéutico de Mamíferos Marinos
Investigador principal: Juan Antonio Gilabert Santos
Proyecto Nº: 168
Tipo: Grupos Innovadores: Proyectos de innovación educativa y mejora de la docencia
Entidad financiadora: Universidad Complutense, PIMCD-168, 20013/2014
Centro: Facultad de Veterinaria
Departamento: Toxicología y Farmacología

Title: 'Aplicando el conocimiento a casos reales: Otra forma de aprender'
Head: Prof. Santos, M.
Reference: Universidad Complutense, PIMCD-56, 2007/2008
Institutions: Universidad Complutense of Madrid

Title: '*Simulación: Una asignatura transversal*'
Head: Prof. Santos, M.
Reference: *Universidad Complutense, PIMCD-582, 2006/2007*
Institutions: Universidad Complutense of Madrid

Title: '*Uso y evaluación de herramientas software libre para la enseñanza y la investigación en matemáticas*'
Head: Prof. Gómez-Chacón, I.
Reference: *Universidad Complutense, PIMCD-618, 2009/2010*
Institutions: Universidad Complutense of Madrid

Title: '*Asistencia al desarrollo de materiales didácticos para el campus virtual*'
Head: Prof. Santos, M.
Reference: *Universidad Complutense, PIMCD-710, 2009/2010*
Institutions: Universidad Complutense of Madrid

Madrid, November, 2015