

PROF. CONCHA BIELZA



A. GENERAL INFORMATION

PERSONAL INFORMATION

Name:	Concha Bielza
Birthdate:	April 16, 1966
Nationality:	Spanish
Address:	Department of Artificial Intelligence Technical University of Madrid Campus de Montegancedo, s/n 28660 Boadilla del Monte, Madrid, Spain
Telephone:	(+34) 91 067 28 83
Fax:	(+34) 91 352 48 19
E-mail:	mcbielza@fi.upm.es
Url:	http://cig.fi.upm.es/CIGmembers/concha_bielza

ACADEMIC POSITIONS

- Co-leader of the Computational Intelligence Group since its foundation in 2010
- Full Professor with the Department of Artificial Intelligence, Technical University of Madrid, Spain (since 2010)
- Associate Professor with the Department of Artificial Intelligence, Technical University of Madrid, Spain (1997-2010)
- Assistant Professor with the Department of Artificial Intelligence, Technical University of Madrid, Spain (1991-1997)
- Part-time Lecturer with the Complutense University of Madrid - St. Thomas University (1989-1992)

QUALIFICATIONS

- Habilitation for full Professor in Engineering, Madrid, Spain, 2009
- PhD in Computer Science, *Contributions to the Analysis of Decision-Making Supercomplex Problems*, Technical University of Madrid, Spain, 1996. Awarded with the best PhD thesis in the Technical University of Madrid
- Degree on Mathematics, specialization in Statistics and Operation Research, Complutense University of Madrid, Spain, 1989

OTHER

- Three research periods awarded by the Ministry of Education, Culture and Sports: 1995-2000, 2001-2006, 2007-2012
- Five teaching periods awarded by the Technical University of Madrid: 1992-1996, 1997-2001, 2002-2006, 2007-2011, 2012-2016

RESEARCH INTEREST

My main research interests are: Probabilistic graphical models (Decision Analysis under uncertainty specially with Influence Diagrams, partial information on probabilities and utilities, approximate solutions, explanation of results), Bayesian networks (learning from data, supervised and unsupervised classification), evolutionary computation (genetic algorithms, estimation of distribution algorithms, applications in (multi-objective) optimization), logistic regression and regularization, application domains: medicine, reservoirs, auctions, project selection, industrial machining, astrophysics, agriculture, bioinformatics, bibliometry, neuroscience, industry 4.0, sports.

THE CV IN NUMBERS (Dec 31, 2018)

- Books: 6
- Edited Books: 2
- Journal Papers (Web of Science): 117
- Journal Papers (Not in Web of Science): 14
- Book Chapters: 42
- Conference Publications: 60
- Conference Contributions: 162 (24 invited + 138 accepted)
- Technical Reports: 22
- Awards: 23
- Public Research Projects: 51
- Private Research Projects: 21
- Supervised Ph.D. Theses: 13
- Supervised Master Theses: 25
- Supervised Graduate Projects: 28
- Editorial Board of Journals: 2
- Editor of Journal Special Issues: 4
- Journal Referee: 64 manuscripts in 39 journals
- Plenary Talks in Conferences: 4
- Organizer of Congress and Scientific Events: 12
- Program Committee Member: 70
- Session Chair of Conferences: 15
- Round Tables: 4
- Tutorials: 3
- Member of Committees Evaluating Scientific Projects, Grants and Research Careers: 18
- Patents: 1
- Registered Software: 3

CITATIONS AND *h*-INDEX

- Web of Science (12/26/18)
Citations: 1815
h-index: 20
Two Highly Cited Papers at Essential Science Indicators (top 1% of articles): papers #64 and #106
 - Google Scholar (12/26/18)
Citations: 4186
h-index: 29
i10-index: 78
Citations (since 2013): 3012
h-index (since 2013): 25
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B. PUBLICATION RECORD

BOOKS

1. Bielza, C., Larrañaga, P. (2019). *Data-Driven Computational Neuroscience*. Cambridge University Press, in press. +700 pages
2. Larrañaga, P., Atienza, D., Diaz-Rozo, J., Ogbechie, A., Puerto-Santana, C., Bielza, C. (2019). *Industrial Applications of Machine Learning*. CRC Press. 336 pages
3. Ibáñez, A., Bielza, C., Larrañaga, P. (2011). *Scientific Productivity and Visibility of Public Spanish Universities Academic Staff in the Area of Computer Sciences*. Fundación General de la U.P.M. (in Spanish). 280 pages
4. Ríos-Insua, S., Mateos, A., Bielza, C., Jiménez, A. (2004). *Operation Research. Deterministic and Stochastic Models*. Centro de Estudios Ramón Areces (in Spanish). 552 pages. Awarded with the Best Textbook Prize (UPM Foundation)
5. Ríos-Insua, S., Bielza, C., Mateos, A. (2002). *Fundamentals of Decision Support Systems*. Ra-Ma (in Spanish). 416 pages
6. Ballester, E., Bielza, C., Gómez, M., Maldonado, J.A., Ballbé, P. (1999). *Health Economy, Statistics for Medical Doctors, Computer-Based Clinical Training*. Dossat 2000 (in Spanish). 317 pages

EDITED BOOKS

1. Bielza, C., Salmerón, A., Alonso-Betanzos, A., Hidalgo, J.I., Martínez, L., Troncoso, A., Corchado, E., Corchado, J.M. (2013). *Advances in Artificial Intelligence, Lecture Notes in Artificial Intelligence, Vol. 8109*. Springer. 404 pages
2. Bielza, C., Salmerón, A. (2013). *Proceedings of the XV Conference of the Spanish Association for Artificial Intelligence (CAEPIA 2013)*. CEDI (in Spanish). 158 pages

JOURNAL PAPERS (ISI WEB OF KNOWLEDGE)

1. B. Mihaljević, P. Larrañaga, and C. Bielza (2018). `bnclassify`: Learning Bayesian network classifiers. *R Journal*, accepted
2. M. Benjumeda, C. Bielza, and P. Larrañaga (2018). Learning tractable Bayesian networks in the space of elimination orders. *Artificial Intelligence*, accepted
3. I. Leguey, R. Benavides-Piccione, C. Rojo, P. Larrañaga, C. Bielza, and J. DeFelipe (2018). Patterns of dendritic basal field orientation of pyramidal neurons in the rat somatosensory cortex. *eNeuro*, 5, 6, e0142, 1–13
4. L. Anton-Sanchez, F. Effenberger, C. Bielza, P. Larrañaga, H. Cuntz (2018). A regularity index for dendrites - local statistics of a neuron's input space. *PLOS Computational Biology*, 14, 11, e1006593
5. B. Mihaljević, P. Larrañaga, R. Benavides-Piccione, S. Hill, J. DeFelipe, and C. Bielza (2018). Towards a supervised classification of neocortical interneuron morphologies, *BMC Bioinformatics*, 19, 511
6. S. Luengo-Sanchez, I. Fernaud-Espinosa, C. Bielza, R. Benavides-Piccione, P. Larrañaga, J. DeFelipe (2018). 3D morphology-based clustering and simulation of human pyramidal cell dendritic spines. *PLOS Computational Biology*, 14, 6, e1006221
7. J. Diaz-Rozo, C. Bielza, and P. Larrañaga (2018). Clustering of data streams with dynamic Gaussian mixture models. An IoT application in industrial processes. *IEEE Internet of Things Journal*, 5, 5, 3533-3547
8. G. Varando, R. Benavides-Piccione, A. Muñoz, A. Kastanauskaite, C. Bielza, P. Larrañaga, J. DeFelipe (2018). MultiMap: A tool to automatically extract and analyze spatial microscopic data from large stacks of confocal microscopy images. *Frontiers in Neuroanatomy*, 12, Article 37

9. M. Benjumbeda, C. Bielza, and P. Larrañaga (2018). Tractability of most probable explanations in multidimensional Bayesian network classifiers. *International Journal of Approximate Reasoning*, 93, 74-87
10. J. Mu, K.R. Chaudhuri, C. Bielza, J. de Pedro-Cuesta, P. Larrañaga and P. Martinez-Martin (2017). Parkinson's disease subtypes from cluster analysis of motor and non-motor symptoms. *Frontiers in Aging Neuroscience*, 9, Article 301
11. L. Anton-Sanchez, P. Larrañaga, R. Benavides-Piccione, I. Fernaud-Espinosa, J. DeFelipe, and C. Bielza (2017). Three-dimensional spatial modeling of spines along dendritic networks in human cortical pyramidal neurons. *PLoS ONE*, 12, 6, e0180400
12. L. Anton-Sanchez, C. Bielza, and P. Larrañaga (2017). Network design through forests with degree- and role-constrained minimum spanning trees. *Journal of Heuristics*, 23 (1), 31-51
13. Rodriguez-Lujan, L., Larrañaga, P., Bielza, C. (2017). Frobenius norm regularization for the multivariate von Mises distribution. *International Journal of Intelligent Systems*, 32, 2, 153-176
14. Fernandez-Gonzalez, P., Benavides-Piccione, R., Leguey, I., Bielza, C., Larrañaga, P., DeFelipe, J. (2017). Dendritic branching angles of pyramidal neurons of the human cerebral cortex. *Brain Structure & Function*, 222, 4, 1847-1859
15. Anton-Sanchez, L., Bielza, C., Larrañaga, P., DeFelipe, J. (2016). Wiring economy of pyramidal cells in the juvenile rat somatosensory cortex. *PLoS ONE*, 11, 11, e0165915
16. Anton-Sanchez, L., Bielza, C., Benavides-Piccione, R., DeFelipe, J., Larrañaga, P. (2016). Dendritic and axonal wiring optimization of cortical GABAergic interneurons. *Neuroinformatics*, 14, 4, 453-464
17. Leguey, I., Bielza, C., Larrañaga, P., Kastanauskaite, A., Rojo, C., Benavides-Piccione, R., and DeFelipe, J. (2016). Dendritic branching angles of pyramidal cells across layers of the juvenile rat somatosensory cortex. *Journal of Comparative Neurology*, 524, 13, 2567-2576
18. Leitner, F., Bielza, C., Hill, S.L., Larrañaga, P. (2016). Data publications correlate with citation impact. *Frontiers in Neuroscience*, 10, Article 419
19. Varando, G., Bielza, C., Larrañaga, P. (2016). Decision functions for chain classifiers based on Bayesian networks for multi-label classification. *International Journal of Approximate Reasoning*, 68, 164-178
20. Borchani, H., Larrañaga, P., Gama, J., Bielza, C. (2016). Mining multi-dimensional concept-drifting data streams using Bayesian network classifiers. *Intelligent Data Analysis*, 20, 2, 257-280
21. Rojo, C., Leguey, I., Kastanauskaite, A., Bielza, C., Larrañaga, P., DeFelipe, J., Benavides-Piccione, R. (2016). Laminar differences in dendritic structure of pyramidal neurons in juvenile rat somatosensory cortex. *Cerebral Cortex*, 26, 6, 2811-2822
22. Varando, G., Bielza, C., Larrañaga, P. (2015). Decision boundary for discrete Bayesian network classifiers. *Journal of Machine Learning Research*, 16, 2725-2749
23. Bielza, C., Gama, J., Jorge, A., Žliobaitė, I. (2015). Guest editors introduction: special issue of the ECMLPKDD 2015 journal track. *Data Mining and Knowledge Discovery*, 29, 1113-1115
24. Bielza, C., Gama, J., Jorge, A., Žliobaitė, I. (2015). Guest editors introduction: special issue of the ECMLPKDD 2015 journal track. *Machine Learning*, 100, 157-159
25. Luengo-Sanchez, S., Bielza, C., Benavides-Piccione, R., Fernaud-Espinosa, I., DeFelipe, J., Larrañaga, P. (2015). A univocal definition of the neuronal soma morphology using Gaussian mixture models. *Frontiers in Neuroanatomy*, 9, Article 137
26. Borchani, H., Varando, G., Bielza, C., Larrañaga, P. (2015). A survey on multi-output regression. *Wiley Interdisciplinary Reviews-Data Mining and Knowledge Discovery*, 5, 216-233

27. Olazarán, J., M. Valentí, B. Frades, M.A. Zea-Sevilla, M. Ávila-Villanueva, M.A. Fernández-Blázquez, M. Calero, J.L. Dobato, J. A. Hernández-Tamames, B. León-Salas, L. Agüera-Ortiz, J. López-Álvarez, P. Larrañaga, C. Bielza, J. Álvarez-Linera, P. Martínez-Martin (2015). The Vallecas Project: a cohort to identify early markers and mechanisms of Alzheimer's disease. *Frontiers in Aging Neuroscience*, 7, Article 181
28. Larrañaga, A., Bielza, C., Pongrácz, P., Faragó, T., Bálint, A., Larrañaga, P. (2015). Comparing supervised learning methods for classifying sex, age, context and individual Mudi dogs from barking. *Animal Cognition*, 18, 2, 405-421
29. Bielza, C., Moral, S., Salmerón, A. (2015). Recent advances in probabilistic graphical models. Editorial. *International Journal of Intelligent Systems*, 30, 3, 207-208
30. Varando, G., López-Cruz, P.L., Nielsen, T., Larrañaga, P., Bielza, C. (2015). Conditional density approximations with mixtures of polynomials. *International Journal of Intelligent Systems*, 30, 3, 236-264
31. Mihaljević, B., Benavides-Piccione, R., Guerra, L., DeFelipe, J., Larrañaga, P., Bielza, C. (2015). Classifying GABAergic interneurons with semi-supervised projected model-based clustering. *Artificial Intelligence in Medicine*, 65, 49-59
32. Masegosa, A. R., Armañanzas, R., Abad-Grau, M. M., Potenciano, V., Moral, S., Larrañaga, P., Bielza, C., Matesanz, F. (2015). Discretization of expression quantitative trait loci in association analysis between genotypes and expression data. *Current Bioinformatics*, 10, 2, 144-164
33. López-Cruz, P.L., Bielza, C., Larrañaga, P. (2015). Directional naive Bayes classifiers. *Pattern Analysis and Applications*, 18, 225-246
34. Mihaljević, B., Benavides-Piccione, R., Bielza, C., DeFelipe, J., Larrañaga, P. (2015). Bayesian network classifiers for categorizing cortical GABAergic interneurons. *Neuroinformatics*, 13, 2, 193-208
35. Karshenas, H., Bielza, C., Larrañaga, P. (2015). Interval-based ranking in noisy evolutionary multi-objective optimization. *Computational Optimization and Applications*, 61, 2, 517-555
36. Mihaljević, B., Bielza, C., Benavides-Piccione, R., DeFelipe, J., Larrañaga, P. (2014). Multi-dimensional classification of GABAergic interneurons with Bayesian network-modeled label uncertainty. *Frontiers in Computational Neuroscience*, 8, Article 150
37. Bielza, C., Larrañaga, P. (2014). Bayesian networks in neuroscience: A survey. *Frontiers in Computational Neuroscience*, 8, Article 131
38. Anton-Sanchez, L., Bielza, C., Merchán-Pérez, A., Rodríguez, J.-R., DeFelipe, J., Larrañaga, P. (2014). Three-dimensional distribution of cortical synapses: A replicated point pattern-based analysis. *Frontiers in Neuroanatomy*, 8, Article 85
39. Bielza, C., Benavides-Piccione, R., López-Cruz, P.L., Larrañaga, P., DeFelipe, J. (2014). Branching angles of pyramidal cell dendrites follow common geometrical design principles in different cortical areas. *Scientific Reports*, 4, Article 5909
40. Morales, J., Benavides-Piccione, R., Dar, M., Fernaud, I., Rodríguez, A., Anton-Sanchez, L., Bielza, C., Larrañaga, P., DeFelipe, J., Yuste, R. (2014). Random positions of dendritic spines in the human cerebral cortex, *Journal of Neuroscience*, 34, 30, 10078-10084
41. Bielza, C., Larrañaga, P. (2014). Discrete Bayesian network classifiers: A survey. *ACM Computing Surveys*, 47, 1, Article 5 (43 pages)
42. López-Cruz, P.L., Larrañaga, P., DeFelipe, J., Bielza, C. (2014). Bayesian network modeling of the consensus between experts: An application to neuron classification. *International Journal of Approximate Reasoning*, 55, 1, 3-22
43. Ibáñez, A., Bielza, C., Larrañaga, P. (2014). Cost-sensitive selective naive Bayes classifiers for predicting the increase of the h-index for scientific journals. *Neurocomputing*, 135, 5, 45-52

44. Guerra, L., Bielza, C., Robles, V., Larrañaga, P. (2014). Semi-supervised projected model-based clustering. *Data Mining and Knowledge Discovery*, 28, 4, 882-917
45. Sucar, L.E., Bielza, C., Morales, E.F., Hernandez-Leal, P., Zaragoza, J.H., Larrañaga, P. (2014). Multi-label classification with Bayesian network-based chain classifiers. *Pattern Recognition Letters*, 41, 14-22
46. López-Cruz, P.L., Bielza, C., Larrañaga, P. (2014). Learning mixtures of polynomials of multidimensional probability densities from data using B-spline interpolation. *International Journal of Approximate Reasoning*, 55, 989-1010
47. Merchán-Pérez, A., Rodríguez, J.R., González, S., Robles, V., DeFelipe, J., Larrañaga, P., Bielza, C. (2014). Three-dimensional spatial distribution of synapses in the neocortex: A dual-beam electron microscopy study. *Cerebral Cortex*, 24, 1579-1588
48. Read, J., Bielza, C., Larrañaga, P. (2014). Multi-dimensional classification with super-classes. *IEEE Transactions on Knowledge and Data Engineering*, 26, 7, 1720-1733
49. Karshenas, H., Santana, R., Bielza, C., Larrañaga, P. (2013). Multi-objective estimation of distribution algorithms based on joint modeling of objectives and variables. *IEEE Transactions on Evolutionary Computation*, 18, 4, 519-542
50. Santana, R., McGarry, L.M., Bielza, C., Larrañaga, P., Yuste, R. (2013). Classification of neocortical interneurons using affinity propagation. *Frontiers in Neural Circuits*, 7, Article 185
51. Vidaurre, D., van Gerven M., Bielza, C., Larrañaga, P., Heskes, T. (2013). Bayesian sparse partial least squares. *Neural Computation*, 25, 12, 3318-3339
52. Ibáñez, A., Larrañaga, P., Bielza, C. (2013). Cluster methods for assessing research performance: Exploring Spanish computer science. *Scientometrics*, 97, 571-600
53. Santana, R., Armañanzas, R., Bielza, C., Larrañaga, P. (2013). Network measures for information extraction in evolutionary algorithms. *International Journal of Computational Intelligence Systems*, 6, 6, 1163-1188
54. Borchani, H., Bielza, C., Toro, C., Larrañaga, P. (2013). Predicting human immunodeficiency virus inhibitors using multi-dimensional Bayesian network classifiers. *Artificial Intelligence in Medicine*, 57, 3, 219-229
55. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). A survey of L_1 regression. *International Statistical Review*, 81, 3, 361-387
56. Bielza, C., Fernández del Pozo, J.A., Larrañaga, P. (2013). Parameter control of genetic algorithms by learning and simulation of Bayesian Networks. A case study for the optimal ordering of tables. *Journal of Computer Science and Technology*, 28 (4), 720-731
57. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). An L_1 -regularized naive Bayes-inspired classifier for discarding redundant predictors. *International Journal on Artificial Intelligence Tools*, 22, 4, 1350019
58. Armañanzas, R., Alonso-Nanclares, L., DeFelipe-Oroquieta, J., Kastanauskaite, A., de Sola, R.G., DeFelipe, J., Bielza, C., Larrañaga, P. (2013). Machine learning approach for the outcome prediction of temporal lobe epilepsy surgery. *PLoS ONE*, 8, 4:e62819
59. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). Sparse regularized local regression. *Computational Statistics and Data Analysis*, 62, 122-135
60. Armañanzas, R., Bielza, C., Chaudhuri, K.R., Martínez-Martín, P., Larrañaga, P. (2013). Unveiling relevant non-motor Parkinson's disease severity symptoms using a machine learning approach. *Artificial Intelligence in Medicine*, 58(3), 195-202
61. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). Classification of neural signals from sparse autoregressive features. *Neurocomputing*, 111, 21-26

62. Larrañaga, P., Karshenas, H., Bielza, C., Santana, R. (2013). A review on evolutionary algorithms in Bayesian network learning and inference tasks. *Information Sciences*, 233, 109-125
63. DeFelipe J, López-Cruz PL, Benavides-Piccione R, Bielza C, Larrañaga P, Anderson S, Burkhalter A, Cauli A, Fairén A, Feldmeyer D, Fishell G, Fitzpatrick D, Freund TF, González-Burgos G, Hestrin S, Hill S, Hof PR, Huang J, Jones EG, Kawaguchi Y, Kisvárdy Z, Kubota Y, Lewis DA, Marín O, Markram H, McBain CJ, Meyer HS, Monyer H, Nelson SB, Rockland K, Rossier J, Rubenstein JLR, Rudy B, Scanziani M, Shepherd GM, Sherwood CC, Staiger JF, Tamás G, Thomson A, Wang Y, Yuste R, Ascoli GA (2013). New insights in the classification and nomenclature of cortical GABAergic interneurons. *Nature Reviews Neuroscience*, 14(3), 202-216
 → Highly Cited Paper at Essential Science Indicators (top 1% of articles by total citations in discipline Neuroscience & Behavior)
64. Ibáñez, A., Bielza, C., Larrañaga, P. (2013). Análisis de la actividad científica de las universidades públicas españolas en el área de las tecnologías informáticas. *Revista Española de Documentación Científica*, 36(1): e002
65. García-Torres, M., Armañanzas, R., Bielza, C., Larrañaga, P. (2013). Comparison of metaheuristic strategies for peakbin selection in proteomic mass spectrometry data. *Information Sciences*, 222, 229-246
66. Karshenas, H., Santana, R., Bielza, C., Larrañaga, P. (2013). Regularized continuous estimation of distribution algorithms. *Applied Soft Computing*, 13, 2412–2432
67. Morales, D.A., Vives-Gilabert, Y., Gómez-Ansón, B., Bengoetxea, E., Larrañaga, P., Bielza, C., Pagonabarraga, J., Kulisevsky, J., Corcuera-Solano, I., Delfino, M. (2013). Predicting dementia development in Parkinson’s disease using Bayesian network classifiers. *Psychiatry Research: NeuroImaging*, 213, 92-98
68. Ibáñez, A., Bielza, C., Larrañaga, P. (2013). Relationship among research collaboration, number of documents and number of citations. A case study in Spanish computer science production in 2000-2009. *Scientometrics*, 95, 689–716
69. Santana, R., Bielza, C., Larrañaga, P. (2012). Conductance interaction identification by means of Boltzmann distribution and mutual information analysis in conductance-based neuron models. *BMC Neuroscience*, 13(Suppl 1):P100
70. Larrañaga, P., Karshenas, H., Bielza, C., Santana, R. (2012). A review on probabilistic graphical models in evolutionary computation. *Journal of Heuristics*, 18, 5, 795–819
71. Vidaurre, D., Rodríguez, E.E., Bielza, C., Larrañaga, P., Rudomin, P. (2012). A new feature extraction method for signal classification applied to cord dorsum potential detection. *Journal of Neural Engineering*, 9, 5, 056009
72. Dueñas, M., Santos, M., Aranda, J.F., Bielza, C., Martínez-Cruz, A.B., Lorz, C., Taron, M., Ciruelos, E.M., Rodríguez-Peralto, J.L., Martín, M., Larrañaga, P., Dahabreh, J., Stathopoulos, G.P., Rosell, R., Paramio, J.M., García-Escudero, R. (2012). Mouse p53-deficient cancer models as platforms for obtaining genomic predictors of human cancer clinical outcomes. *PLoS ONE*, 7, 8: e42494
73. Borchani, H., Bielza, C., Martínez-Martín, P., Larrañaga, P. (2012). Markov blanket-based approach for learning multi-dimensional Bayesian network classifiers: An application to predict the European quality of life-5Dimensions (EQ-5D) from the 39-item Parkinson’s disease questionnaire (PDQ-39). *Journal of Biomedical Informatics*, 45, 6, 1175–1184
74. Santana, R., Bielza, C., Larrañaga, P. (2012). Regularized logistic regression and multi-objective variable selection for classifying MEG data. *Biological Cybernetics*, 106, 6-7, 389–405
75. Maojo, V., García-Remesal, M., Bielza, C., Crespo, J., Pérez-Rey, D., Kulikowski, C. (2012). Bio-medical informatics publications: A global perspective. Part II: Journals. *Methods of Information in Medicine*, 51, 2, 131–137

76. Maojo, V., García-Remesal, M., Bielza, C., Crespo, J., Pérez-Rey, D., Kulikowski, C. (2012). Biomedical informatics publications: A global perspective. Part I: Conferences. *Methods of Information in Medicine*, 51, 2, 82-90
77. Armañanzas, R., Larrañaga, P., Bielza, C. (2012). Ensemble transcript interaction networks: A case study on Alzheimer's disease. *Computer Methods and Programs in Biomedicine*, 108, 1, 442-450
78. Guerra, L., Robles, V., Bielza, C., Larrañaga, P. (2012). A comparison of cluster quality indices using outliers and noise. *Intelligent Data Analysis*, 16, 4, 703-715
79. Vidaurre, D., Bielza, C., Larrañaga, P. (2012). Lazy lasso for local regression. *Computational Statistics*, 27, 3, 531-550
80. Vidaurre, D., Bielza, C., Larrañaga, P. (2011). On nonlinearity in neural encoding models applied to the primary visual cortex. *Network: Computation in Neural Systems*, 22, 1-4, 97-125
81. Ibáñez, A., Larrañaga, P., Bielza, C. (2011). Using Bayesian networks to discover relationships between bibliometric indices. A case study of Computer Science and Artificial Intelligence journals. *Scientometrics*, 89, 2, 523-551
82. Bielza, C., Li, G., Larrañaga, P. (2011). Multi-dimensional classification with Bayesian networks. *International Journal of Approximate Reasoning*, 52, 705-727
83. López-Cruz, P.L., Bielza, C., Larrañaga, P., Benavides-Piccione, R., DeFelipe, J. (2011). Models and simulation of 3D neuronal dendritic trees using Bayesian networks. *Neuroinformatics*, 9, 347-369
84. Fernández del Pozo, J.A., Bielza, C. (2011). Dealing with complex queries in decision support systems. *Data & Knowledge Engineering*, 70, 167-181
85. Bielza, C., Robles, V., Larrañaga, P. (2011). Regularized logistic regression without a penalty term: An application to cancer classification with microarray data. *Expert Systems with Applications*, 38, 5110-5118
86. Santana, R., Bielza, C., Larrañaga, P. (2011). Optimizing brain networks topologies using multi-objective evolutionary computation. *Neuroinformatics*, 9, 3-19
87. Bielza, C., Gómez, M., Shenoy, P.P. (2011). A review of representation issues and modelling challenges with influence diagrams. *Omega: International Journal of Management Science*, 39, 227-241
88. Borchani, H., Larrañaga, P., Bielza, C. (2011). Classifying evolving data streams with partially labelled data. *Intelligent Data Analysis*, 15, 655-670
89. Guerra, L., McGarry, L., Robles, V., Bielza, C., Larrañaga, P., Yuste, R. (2011). Comparison between supervised and unsupervised classification of neuronal cell types: A case study. *Developmental Neurobiology*, 71, 1, 71-82
90. Armañanzas, R., Saeys, Y., Inza, I., García-Torres, M., Bielza, C., van de Peer, Y., Larrañaga, P. (2011). Peakbin selection in mass spectrometry data using a consensus approach with estimation of distribution algorithms. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 8(3), 760-774
91. Bengoetxea, E., Larrañaga, P., Bielza, C., Fernández del Pozo, J.A. (2011). Optimal row and column ordering to improve table interpretation using estimation of distribution algorithms. *Journal of Heuristics*, 17(5), 567-588
92. Cuesta, I., Bielza, C., Cuenca-Estrella, M., Larrañaga, P., Rodríguez-Tudela, J.L. (2010). Evaluation by data mining techniques of fluconazole breakpoints established by the clinical and laboratory standards institute (CLSI) and comparison with those of the European committee on antimicrobial susceptibility testing (EUCAST). *Antimicrobial Agents and Chemotherapy*, 54, 4, 1541-1546
93. Bielza, C., Gómez, M., Shenoy, P.P. (2010). Modelling challenges with influence diagrams: Constructing probability and utility models. *Decision Support Systems*, 49, 354-364

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43. Barreiro, P., Alonso, R., Correa, E.C., Ruiz-Altisent, M., Fabero, J.C., Casasus, L., Calles, M., Bielza, C. (2003). Simulation of gases in fruit storage chambers with lattice Boltzman, *Acta Horticulturae*, 599, 413–419, Ed. International Society for Horticultural Science
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45. Fernández del Pozo, J.A., Bielza, C. (2002). New structures for conditional probability tables, *First European Workshop on Probabilistic Graphical Models*, 61–70, Univ. de Castilla-La Mancha
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49. Barreiro, P., Fabero, J.C., Bielza, C., Bielza, S., Sanz, R., Correa, E., Ruiz-Altisent, M. (2001). Simulación de gases en cámaras de almacenamiento de fruta, *1er Congreso Nacional de Ingeniería para la Agricultura y el Medio Rural (Agro Ingeniería 2001)*, Vol. I, 321–327
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51. Fernández del Pozo, J.A., Bielza, C., Gómez, M. (2001). Construcción de bases de conocimiento en sistemas de ayuda a la decisión, *XXVI Congreso Nacional S.E.I.O.*, 34 pages in CD-ROM
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53. Bielza, C., Barreiro, P., Rodríguez-Galiano, M.I., Martín, J. (2000). Logistic regression for simulating damage occurrence on a fruit grading line, *X Congreso Latinoamericano de Investigación de Operaciones y Sistemas*, 49–50. Extended version in CD: 6 páginas
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TECHNICAL REPORTS

1. Rodríguez-Sánchez, F., Larrañaga, P., Bielza, C. (2017). Multi-Facet Determination for Clustering with Bayesian Networks. Technical Report TR:UPM-ETSIINF/DIA/2017-1, Universidad Politécnica de Madrid (14 pp)
2. Córdoba-Sánchez, I., Bielza, C., Larrañaga, P. (2016). *Graphoids and Separoids in Model Theory*. Technical Report TR:UPM-ETSIINF/DIA/2016-1, Universidad Politécnica de Madrid (13 pp)
3. Anton-Sanchez, L., Bielza, C., Larrañaga, P. (2015). *Evolutionary Computation of Forests with Degree- and Role-Constrained Minimum Spanning Trees*. Technical Report TR:UPM-ETSIINF/DIA/2015-2, Universidad Politécnica de Madrid (24 pp)
4. Fernandez-Gonzalez, P., Bielza, C., Larrañaga, P. (2015). *Univariate and Bivariate Truncated von Mises Distributions*. Technical Report TR:UPM-ETSIINF/DIA/2015-1, Universidad Politécnica de Madrid (42 pp)
5. Varando, G., Bielza, C., Larrañaga, P. (2014). *Decision Boundary for Discrete Bayesian Networks Classifiers*. Technical Report TR:UPM-ETSIINF/DIA/2014-1, Universidad Politécnica de Madrid (23 pp)
6. R. Santana, C. Bielza, P. Larrañaga (2013). *Changing conduction delays to maximize the number of polychronous groups with an estimation of distribution algorithm*. Technical Report TR:UPM-FI/DIA/2013-1, Universidad Politécnica de Madrid (13 pp)
7. H. Karshenas, R. Santana, C. Bielza, and P. Larrañaga (2012). *Multi-objective estimation of distribution algorithm based on joint modeling of objectives and variables*. Technical Report TR:UPM-FI/DIA/2012-2, Universidad Politécnica de Madrid (16 pp)
8. H. Karshenas, C. Bielza, Q. Zhang and P. Larrañaga (2012). *An Interval-based multi-objective approach to feature subset selection using joint modeling of objectives and variables*. Technical Report TR:UPM-FI/DIA/2012-1, Universidad Politécnica de Madrid (18 pp)
9. R. Armañanzas, C. Bielza, P. Larrañaga, P. Martínez-Martín (2011). *Restating Parkinson's disease severity indices by means of non-motor criteria*. Technical Report TR:UPM-FI/DIA/2011-2, Universidad Politécnica de Madrid (40 pp)
10. H. Karshenas, R. Santana, C. Bielza, P. Larrañaga (2011). *Regularized model learning in estimation of distribution algorithms for continuous optimization problems*. Technical Report TR:UPM-FI/DIA/2011-1, Universidad Politécnica de Madrid (29 pp)
11. R. Santana, C. Bielza, P. Larrañaga (2010). *Network measures for re-using problem information in EDAs*. Technical Report TR:UPM-FI/DIA/2010-3, Universidad Politécnica de Madrid (11 pp)
12. P. López-Cruz, C. Bielza, P. Larrañaga, R. Benavides-Piccione, J. DeFelipe (2010). *Bayesian networks applied to the simulation and modelling of 3D basal dendritic trees from pyramidal neurons*. Technical Report TR:UPM-FI/DIA/2010-2, Universidad Politécnica de Madrid (29 pp)
13. C. Bielza, G. Li, P. Larrañaga (2010). *Multi-dimensional classification with Bayesian networks*. Technical Report TR:UPM-FI/DIA/2010-1, Universidad Politécnica de Madrid (34 pp)
14. D. Vidaurre, C. Bielza, P. Larrañaga (2009). *Learning a L1-regularized Gaussian Bayesian network in the equivalence class space*. Technical Report. UPM.FI/DIA/2009-2, Universidad Politécnica de Madrid (22 pp)

15. C. Bielza, J. A. Fernández del Pozo, P. Larrañaga, E. Bengoetxea (2009). *Multidimensional statistical analysis of the parameterization of a genetic algorithm for the optimal ordering of tables*. Technical Report. UPM.FI/DIA/2009-1, Universidad Politécnica de Madrid (25 pp)
16. M. Correa, C. Bielza (2009). *Explanation of a Bayesian network classifier by means of decision trees*. Technical Report UPM-FI-DIA/2009-3, Universidad Politécnica de Madrid (22 pp)
17. Bielza, C., Gómez, M., Shenoy, P. (2009). *Modelling challenges with influence diagrams: Representation issues*, Working Paper No.319, School of Business, University of Kansas (42 pp)
18. Bielza, C., Gómez, M., Shenoy, P. (2009). *Modelling challenges with influence diagrams: Constructing probability and utility models*, Working Paper No.320, School of Business, University of Kansas (26 pp)
19. Bielza, C., Shenoy, P. (1998). *A comparison of graphical techniques for asymmetric decision problems: Supplement to management science paper*, Working Paper No.282, School of Business, University of Kansas (36 pp)
20. Bielza, C., Ríos Insua, D. (1998). *Modelos gráficos para la toma de decisiones*, Technical Report 98-07 on Informatics and Applied Mathematics, Universidad Rey Juan Carlos (23 pp)
21. Bielza, C., Vidakovic, B. (1996). *Time adaptive wavelet denoising*, Discussion Paper 1996-24, ISDS, Duke University (14 pp)
22. Ríos Insua, D., Salewicz, K.A., Müller, P., Bielza, C. (1996). *Bayesian methods in reservoir operations: The Zambezi river case*, Discussion Paper 1996-30, ISDS, Duke University (49 pp)

AWARDS

1. Best PhD thesis of L. Anton-Sanchez (under my supervision) awarded by the Technical University of Madrid, Madrid (2018)
2. Second Prize in the *Frances Allen Award of the XVIII Conferencia de la Asociación Española de Inteligencia Artificial (CAEPIA-2018)* to PhD thesis of L. Anton-Sanchez (under my supervision), Granada 2018
3. Best student paper of the *9th International Conference on Probabilistic Graphical Models*, Prague (2018)
4. Second Prize in the *Poster Competition of the Second Triennial International Workshop on Advances in Directional Statistics (ADISTA-2017)*, Rome (2017)
5. Best *PhD Project on Artificial Intelligence –Doctoral Consortium–* (under my supervision), given by the Spanish Association for Artificial Intelligence to “Theoretical Studies and New Approaches to Bayesian Network Classifiers”, CAEPIA-2015, Albacete (2015)
6. Best paper of the *1st Machine Learning for Cyber Physical Systems Conference (ML4CPS-2015)*, Lemgo, Germany (2015)
7. Best PhD thesis of P.L. López-Cruz (under my supervision) awarded by the Technical University of Madrid, Madrid (2015)
8. 2014 Technical University of Madrid Research Prize
9. Best student paper in the *15th Annual Genetic and Evolutionary Computation Conference (GECCO-2013)*, Amsterdam (2013)
10. “Marco Ramoni” best paper award of the *European Society for Artificial Intelligence in MEDicine (AIME)*, Murcia (2013)
11. Second position in the “MEG Mind Reading” competition in *PASCAL2 and the International Conference on Artificial Neural Networks*, Espoo, Finland (2011)

12. Best PhD thesis (under my supervision) awarded by the *Spanish Mathematics Society*, Santiago de Compostela, 2011
13. Best paper of the *International Society of Applied Intelligence in IEA-AIE 2010*, Córdoba (2010)
14. First Position in “Biomag Data Analysis Competition 2010” in *Multivariate Classification of MEG Brain Data* in the International Conference on Biomagnetism (Biomag 2010), Dubrovnik, Croacia (2010)
15. Best paper award of the *Mexican International Conference on Artificial Intelligence*, Guanajuato, México (2009)
16. Best referee in the *XIII Conference of the Spanish Association for the Artificial Intelligence (CAEPIA 2009)*, Sevilla (2009)
17. Best graduate project (under my supervision) awarded by *Cátedra Mercamadrid* from Universidad Politécnica de Madrid, Madrid (2009)
18. Best textbook *Operation Research. Deterministic and Stochastic Models* awarded by *Fundación of Universidad Politécnica de Madrid*, Madrid (2004)
19. Best work to spread the health informatics applications of the *Spanish Society of Health Informatics*, Madrid (2004)
20. Best PhD thesis (under my supervision) awarded by the *Spanish Royal Academy of Doctors*, Madrid (2002)
21. Finalist in IV Annual Awards “Decision Analysis Society Practice Award Competition”, awarded by the *Decision Analysis Society of the INstitute For Operations Research and Management Science (INFORMS)*, San José, California, USA (2002)
22. Best PhD thesis in Engineering in the *Universidad Politécnica de Madrid*, Madrid (1997)
23. Award Student Paper Competition in Decision Analysis, awarded by the *Decision Analysis Society of the INstitute For Operations Research and Management Science (INFORMS)*, Atlanta, USA (1996)

C. RESEARCH PROJECTS

PUBLIC PROJECTS

1. *HBP - Human Brain Project. SGA2 Phase*. Horizon 2020, FET Flagship Initiative, European Commission, 2018-2020. Task leader
2. *Excellence Spanish Network “Big Data and Scalable Data Analysis”*. Ministry of Economy, Industry and Competitiveness, 2017-2019
3. *Clasificadores bayesianos multidimensionales para la interpretación de emociones en texto y vídeo*, National Commission of Scientific and Technological Research (CONICYT), Chile, 2018-2019
4. *Supercomputación para la Inteligencia Artificial*. Ministry of Economy, Industry and Competitiveness, 2018-2020
5. *HBP - Human Brain Project. SGA1 Phase*. Horizon 2020, FET Flagship Initiative, European Commission, 2016-2018. Task leader
6. *Advances in Multidimensional Classification and Anomaly Detection with Bayesian Networks*. Ministry of Economy and Competitiveness, 2017-2019. Project Leader
7. *Excellence Spanish Network “Multimodal Interaction in Pattern Recognition and Computer Vision”*. Ministry of Economy and Competitiveness, 2015-2016
8. *Excellence Spanish Network “Big Data and Scalable Data Analysis”*. Ministry of Economy and Competitiveness, 2015-2017

9. *Bayesian Network Learning with non-Directional and Directional Variables for Association Discovery, Multi-Target Prediction and Clustering*. Ministry of Economy and Competitiveness, 2014-2016. Project Leader
10. *Concepts and Applications of Intelligent Systems*. Madrid Autonomous Region, 2014-2016
11. *HBP - Human Brain Project. Rump Up Phase*. FET Flagship Initiative, European Commission, 2013-2016
12. *Spanish Network for the Advancement and Transference of Computational Intelligence*. Ministry of Economy and Competitiveness, 2012-2012
13. *Spanish Network on Data Mining and Machine Learning*. Ministry of Science and Innovation, 2010-2012
14. *HBP - Human Brain Project*. FET Flagship Initiative Preparatory Actions, European Commission, 2011-2011
15. *Data Mining with Probabilistic Graphical Models: New Algorithms and Applications*. Ministry of Science and Innovation, 2011-2013. Project Leader
16. *Follow-up Congress for Computer Technology Projects*, Ministry of Science and Innovation, 2010-2011. Project Leader
17. *Follow-up Congress for Computer Technology Projects*, Ministry of Science and Innovation, 2009-2010. Project Leader
18. *Intelligent Probabilistic System to Model Scientific Productivity in the Computer Science Area*, Ministry of Science and Innovation, 2009-2011. Project Leader
19. *Cajal Blue Brain Project*. Ministry of Science and Innovation, 2008-2018
20. *CENIT: Technologies for Rendering Services in Mobility in the Intelligent Future Universe*, Ministry of Science and Innovation, Center for the Industrial Technological Development, 2008-2012
21. *Incremental Learning of Bayesian Networks with Data Streams from Data Coming from Time-Varying Distributions with Applications to Spam Detection*. Ministry of Foreign Affairs and Cooperation, 2008-2009. Project Leader
22. *Assessing Quality of Individual Predictions in Medical Decision Support Systems*. National Institutes of Health, USA (1-R01-LM009520-01), 2007-2010
23. *CONSOLIDER: Multimodal Interaction in Pattern Recognition and Computer Vision*, Ministry of Education and Science, 2007-2012
24. *Follow-up Congress for Computer Technology Projects*, Ministry of Education and Science, 2008-2009. Project Leader
25. *New Approaches for Multiobjective Learning of Supervised Classification Models and for Knowledge Synthesis in Decision Analysis Models*, Ministry of Education and Science, 2007-2010. Project Leader
26. *Concepts and Support Systems to Electronic Democracy*, Madrid Autonomous Region, 2006-2009
27. *Spanish Network on Probabilistic Graphical Models and Applications (Renewal)*, Ministry of Education and Science, 2007-2008
28. *Spanish Network on Multicriteria Decisions (Renewal 2)*, Ministry of Education and Science, 2006-2007
29. *E-Democracy: Internet-Based Support to Complex Decisions*, Ministry of Education and Science, 2005-2007
30. *Spanish Network on Multicriteria Decisions (Renewal 1)*, Ministry of Education and Science, 2005-2006

31. *Research, Development, Validation and Implementation of a Real State Valuation System Based on Artificial Intelligence Techniques*, Ministry of Economy and Treasury, 2005-2006
32. *Spanish Network on Probabilistic Graphical Models and Applications*, Ministry of Education and Science, 2005-2006
33. *Spanish Network on Pattern Recognition and Applications*, Ministry of Science and Technology, 2004-2006
34. *Spanish Network on Multicriteria Decisions*, Ministry of Science and Technology, 2003-2004
35. *Towards Electronic Democracy: Internet-Based Complex Decision Support*, European Science Foundation, 2002-2006
36. *Spanish Network on Research on Health Results and Public Health Services*, Ministry of Health and Consumption, 2003-2006
37. *Monitoring System of the Post-Harvest Evolution of Fruits and Vegetables, Using Sensor Matrices Based on Different Detection Principles*, Ministry of Science and Technology, 2004-2006
38. *A Multiobjective Decision Support System in Time and with Imprecision*, Ministry of Science and Technology, 2002-2004
39. *Simulation of Movement, Diffusion and Accumulation of Gases in Fruit and Vegetable Cold Storage Chambers Using Cellular Automata*, Technical University of Madrid, 2001-2002. Project Leader
40. *Contributions to Intelligent Decision Support System Development*, Madrid Autonomous Region, 2001-2002
41. *New Approaches for the Development of the IctNeo System for Neonatal Jaundice Decision Support*, Technical University of Madrid, 1999-2000. Project Leader
42. *Implementing Computerised Methodologies to Evaluate the Effectiveness of Countermeasures for Restoring Radionuclide Contaminated Fresh Water Ecosystems*, European Commission, 1999-2001
43. *Development of a Simulator of Damage Occurrence on a Fruit Grading Line*, Technical University of Madrid, 1999-2000. Project Leader
44. *New Approaches to Influence Diagrams-Based Intelligent Decision Systems: Applications to Neonatal Jaundice and Extracorporeal Life Support*, Ministry of Science, Culture and Sports, 1998-1999
45. *An Intelligent System for Reservoir Management*, Ministry of Education and Science, 1998-2000
46. *Complex Decision Problems*, Madrid Autonomous Region, 1997-1999
47. *A Knowledge-Based System for Neonatal Jaundice Treatment*, Ministry of Health and Consumption, 1997-1998
48. *A Model-Based Computerised System for Management Support to Identify Optimal Remedial Strategies for Restoring Radionuclide Contaminated Aquatic Ecosystems and Drainage Areas*, European Commission, 1996-1999
49. *Bayesian Analysis of Stochastic Processes (I y II)*, NATO, 1995-1998
50. *Robust Decision Analysis Implementation*, Ministry of Education and Science, 1995-1998
51. *A Knowledge Based System for Bayesian Reliability Predictions in Repairable Equipments*, Ministry of Education and Science, 1995-1996

PRIVATE PROJECTS

1. REPSOL S.A. *Specific Collaboration Agreement Number 1*, 2018-2019. Project Leader
2. OLOCIP 11 S.L. *Probabilistic models for football predictions*, 2018. Project Leader

3. Etxe-Tar S.A. and Aingura IIoT S.L.U. Subcontracting within project *Nueva infraestructura IoT industrial para la fábrica que aprende (LEARNIIoT)*, granted by Centro para el Desarrollo Tecnológico Industrial (CDTI) of the Ministry of Economy and Competitiveness within Proyectos de Investigación y Desarrollo Individuales Program, 2018-2020. Project CoLeader
4. Etxe-Tar S.A. *Gestión energética avanzada para máquina herramienta de nueva generación (EMON)*, 2017-2017. Project CoLeader
5. Etxe-Tar S.A. Subcontracting within project *Investigación en sistemas ciber-físicos para la detección de anomalías mediante modelos probabilísticos dinámicos en nuevos procesos de tratamiento térmico medioambientalmente sostenibles (TERMPROB)*, granted by Centro para el Desarrollo Tecnológico Industrial (CDTI) of the Ministry of Economy and Competitiveness within Proyectos de Investigación y Desarrollo Individuales Program, 2016–2018. Project CoLeader
6. (Competitive) Grant of Fundación BBVA to Research Groups on the topic of Big Data with project *Multi-view clustering with Bayesian networks*, 2016-2018
7. OLOCIP 11 S.L. *Development of a computer program for prediction and analysis in sports using artificial intelligence*, 2016-2017. Project CoLeader
8. Etxe-Tar S.A. Subcontracting within project *Desarrollo de bienes de equipo avanzados para la cadena de valor manufacturera basados en nuevos conceptos para la ayuda a la toma de decisiones orientada a la generación de servicios de alto valor añadido para la recuperación de la competitividad de la industria española (CARES)*, TIC-20150093, granted by Centro para el Desarrollo Tecnológico Industrial (CDTI) of the Ministry of Economy and Competitiveness within Programa Estratégico de Consorcios de Investigación Empresarial Nacional (CIEN), 2015-2019. Project CoLeader
9. Gaindu S.L. Subcontracting within project *Desarrollo de bienes de equipo avanzados para la cadena de valor manufacturera basados en nuevos conceptos para la ayuda a la toma de decisiones orientada a la generación de servicios de alto valor añadido para la recuperación de la competitividad de la industria española (CARES)*, TIC-20150093, granted by Centro para el Desarrollo Tecnológico Industrial (CDTI) of the Ministry of Economy and Competitiveness within Programa Estratégico de Consorcios de Investigación Empresarial Nacional (CIEN), 2015-2019. Project CoLeader
10. Abbott Products Operations AG. *Probabilistic Mapping of PDQ-39 (or PDQ-8) to the EQ-5D Utility Index Based on Multi-Dimensional Bayesian Network Classifiers*, 2011. Project Leader
11. Atos Origin (P10-1015-100). *Dynamic Probabilistic Graphical Models and their Applications*, 2009-2011. Project Leader
12. Produban (Banco Santander). *Minería de Datos y Geomarketing sobre Datos Financiero/Bancarios*, 2009-2010
13. Panda Security. *Adaptación Dinámica del Cambio en Sistemas de Aprendizaje. Problemática Drift*, 2009. Project Leader
14. Fundación Gil Gayarre. *Implantación y Explotación de una Medida de la Calidad de los Servicios en la Fundación Gil Gayarre*, 2005-2006
15. European Computing Consultants. *Modelos Dinámicos Lineales Bayesianos para la Previsión de la Demanda*, 2004. Project Co-leader
16. Telefónica, Publicidad e Información (TPI). *Predicción de Ventas por Anuncios en Páginas Amarillas*, Sept2002-Feb2003. Project Co-leader
17. Fundación Gil Gayarre. *Definición, Construcción, Implantación y Explotación de una Medida de la Calidad de los Servicios en la Fundación Gil Gayarre*, 2001-2002
18. Arthur Andersen. *Modelo de Predicción de Precios del Mercado Eléctrico*, 2001-2003. Project Co-leader
19. Airtel Móvil. *Optimización de Costes a Través de la Calidad y Fidelización: Un Enfoque Estadístico*, 1999

20. Coopers & Lybrand. *Una Metodología de Evaluación de la Calidad*, 1996-1997
21. Iberdrola. *Una Metodología para la Gestión de Embalses Hidroeléctricos*, 1995-1997

D. TEACHING AND SUPERVISION

UNDERGRADUATE COURSES

Machine Learning, Data Mining, Decision Support Systems, Information Systems, Models and Simulation, Simulation Methods, Stochastic Processes and Networks, Probability and Statistics, Statistical Inference, Mathematics for the Financial and Social Sciences

MASTER COURSES

Decision Support Systems, Machine Learning, Bayesian Networks, Data Mining, Intelligent Data Analysis, Bayesian Reasoning with Graphical Models

DOCTORATE COURSES

Bayesian Reasoning with Graphical Models, Probabilistic Graphical Models in Medicine, Fundamentals of Probabilistic Graphical Models, Decision Support Systems, Bayesian Methods in Artificial Intelligence, Randomized Computation, Simulation and Artificial Intelligence

SUMMER SCHOOLS

Madrid UPM Advanced Statistics and Data Mining Summer School (a worldwide top ten maths and stats summer school according to INOMICS, with 13 editions since 2006), Coordinator and Instructor

SUPERVISED PH. D. THESES –All PhD in Computer Science, Technical University of Madrid

1. B. Mihaljević (2018). *Contributions to Bayesian Network Classifiers and Interneuron Classification*
2. G. Varando (2018). *Theoretical Studies on Bayesian Network Classifiers*
3. I. Leguey (2018). *Directional-linear Bayesian Networks and Applications in Neuroscience*
4. L. Anton-Sanchez (2017). *Statistical and Optimization Methods for Spatial Data Analysis Applied to Neuroscience*
5. A. Ibañez (2015). *Machine Learning in Scientometrics*
6. P.L. López-Cruz (2013). *Contributions to Bayesian networks learning with applications to neuroscience*
7. H. Karshenas (2013). *Regularized model learning in EDAs for continuous and multi-objective optimization*
8. H. Borchani (2013). *Multi-dimensional classification using Bayesian networks for stationary and evolving streaming data*
9. L. Guerra (2012). *Semi-supervised subspace clustering and applications to neuroscience*
10. D. Vidaurre (2012). *Regularization for sparsity in statistical analysis and machine learning*
11. M. Correa (2010). *Inteligencia artificial para predicción y control del acabado superficial en procesos de fresado a alta velocidad*
12. J.A. Fernández del Pozo (2006). *Listas KBM2L para la Síntesis de Conocimiento en Sistemas de Ayuda a la Decisión*

13. M. Gómez (2002). *IctNeo: Un sistema de ayuda a la decisión para el tratamiento de la ictericia en recién nacidos*

SUPERVISED MASTER THESES –All in Technical University of Madrid

1. A. Rodríguez-González (2018). *Aprendizaje Automático Aplicado al Scouting Futbolístico*
2. A. Alcón (2018). *Modelos de Aprendizaje Automático sobre el Juego del Club Movistar Estudiantes*
3. D. Valero (2018). *Nuevo Algoritmo de Clasificación Multietiqueta con Redes Bayesianas. Aplicación a un Problema Industrial*
4. S. Gil-Begué (2018). *Nuevos CLasificadores Bayesianos Multi-Dimensionales. Aplicaciones a la Eficiencia Energética en la Industria 4.0*
5. C. Villa (2018). *Estudio de la Deriva Térmica sobre una Máquina de Medición de Alta Precisión mediante Análisis de Regresión Multi-Respuesta*
6. C.E. Puerto-Santana (2018). *Asymmetric Linear Gaussian Hidden Markov Models with an Application to Determine Bearings Health State*
7. M. Llera (2017). *A Novel Multi-dimensional Regression Model based on Gaussian Networks*
8. S. Vakarak (2017). *Redes Bayesianas Clasificadoras Multidimensionales en Tiempo Continuo*
9. F.J. Mesonero (2017). *Arquitectura para Detección de Anomalías en un Proceso de Templado Laser*
10. A. Ogbechie (2017). *Using Dynamic Bayesian Networks for the Automated Visual Inspection and Analysis of an Industrial Laser Process*
11. D. Atienza (2016). *Detección de Anomalías durante un Proceso de Templado Láser con un Seguimiento Espacio-Temporal*
12. F. Rodríguez Sánchez (2016). *Multi-view Clustering with Bayesian Networks*
13. I. Córdoba-Sánchez (2015). *Fusión de Redes Bayesianas Gaussianas*
14. L. Antón-Sánchez (2015). *Computación Evolutiva de Bosques de Expansión Mínimos con Restricciones de Grado y de Rol*
15. L. Rodríguez-Luján (2015). *Caracterización y Simulación de Arborizaciones Dendríticas con Redes Bayesianas Incluyendo Variables Angulares*
16. Patricia Maraver (2015). *Clasificación Supervisada de las Neuronas de la Base de Datos NeuroMorpho*
17. M. Benjumeda (2014). *Learning Bayesian Networks from Data by the Incremental Compilation of New Network Polynomials*
18. S. Luengo (2014). *Clustering Basado en Redes Bayesianas con Predictoras Continuas. Aplicaciones en Neurociencia*
19. P. Fernández-González (2014). *Contributions to the truncated von Mises distribution for the univariate and bivariate case*
20. P. López-Adeva (2013). *Markov models for the multivariate von Mises distribution*
21. B. Mihaljevic (2013). *BAYESCLASS. An R package for learning Bayesian network classifiers. Applications to neuroscience*
22. J. Pérez (2012). *Replicated spatial point processes for statistical neuroscience*
23. P. López-Cruz (2010). *Simulación de morfologías dendríticas mediante redes Bayesianas*
24. A. Ibáñez (2009). *Técnicas de aprendizaje automático aplicadas a la bibliometría*

25. M.A. Abad (2009). *Minería de datos dependiente del contexto en dispositivos ubicuos*

[SUPERVISED GRADUATE PROJECTS –All in Technical University of Madrid](#)

1. L. Ameneiro (2017). *Diseño de un entorno en R para redes Bayesianas*
2. N. de Lucas (2017). *Desarrollo en R de algoritmos de aprendizaje de clasificadores Bayesianos para variables continuas*
3. A. Canales (2009). *Estudio bibliométrico de la producción científica del Departamento de Inteligencia Artificial, UPM, 2004-2008*
4. M. Vaquero (2009). *Heurísticos de optimización para regresión logística regularizada*
5. F. Andrés (2009). *Clasificadores Bayesianos para la detección de correo basura*
6. M. Fernández (2008). *Interfaz gráfico en vendimiadora para viticultura de precisión*
7. R. Gómez (2008). *Construcción de un filtro anti-spam con distintos clasificadores*
8. D. Soto (2008). *Diseño y desarrollo de un interfaz gráfico con LabVIEW para un Equipo espectrofotométrico de campo en la evaluación de frutos intactos*
9. I. Barrilero (2008). *Identificación de variables relevantes en modelos de toma de decisiones con diagramas de influencia*
10. A. Pérez (2007). *Detección de movimiento robusta a cambios de iluminación*
11. V. Oliva (2004). *Ajuste y generación de distribuciones para simular líneas de clasificación de fruta. SimLin 3.0*
12. D. Quero (2003). *Técnicas de seguimiento en visión computacional*
13. S. Galán (2003). *Simulación distribuida mediante la arquitectura HLA*
14. M. Calles (2002). *Simulador del movimiento, difusión y acumulación de gases en cámaras de frigoconservación de frutas y hortalizas mediante autómatas celulares. Versión 2.0*
15. V. Canseco (2002). *Distribución selectiva de la información*
16. E. Córcoles (2002). *Algoritmo genético para la búsqueda de secuencias de borrado de nodos en diagramas de influencia*
17. M. Ramos (2001). *Aspectos computacionales relacionados con la evaluación de diagramas de influencia*
18. S. Bielza (2001). *Simulador del movimiento, difusión y acumulación de gases en cámaras de frigoconservación de frutas y hortalizas mediante autómatas celulares*
19. R. Heradio (2000). *Regresión logística para la predicción de daño y simulación de líneas de clasificación de fruta*
20. M. Gersol (1999). *Gestión y control de la calidad en el servicio y su aplicación en entidades bancarias*
21. M. Cruz (1999). *Programa BAYES para inferencia estadística Bayesiana*
22. O. Pacios (1999). *Simulador de líneas de clasificación*
23. J.A. Fernández del Pozo (1998). *Sistema de ayuda a la decisión para el tratamiento de la ictericia neonatal: IctNeo*
24. J. Rey (1997). *Optimización discreta con computación local*
25. E. Pérez (1997). *BayRes: Un sistema de gestión de embalses. Módulo de optimización*
26. J. Fuertes (1997). *BayRes: Un sistema de gestión de embalses. Módulo de preferencias*

27. M. Farache (1996). *BayRes: Un sistema de gestión de embalses. Módulo de predicción*
28. A. Alberite (1995). *Redes de evaluación: Una herramienta para representar y resolver problemas de análisis de decisión*

E. SERVICE TO THE ACADEMIC COMMUNITY

EDITORIAL BOARD OF JOURNALS

1. Associate Editor of *Frontiers in Computational Neuroscience*
2. Editorial Board of *Neuroinformatics*

EDITOR OF JOURNAL SPECIAL ISSUES

1. C. Bielza, J. Gama, A. Jorge, I. Žliobaitė (2015). Special ECML PKDD issue. *Machine Learning*
2. C. Bielza, J. Gama, A. Jorge, I. Žliobaitė (2015). Special ECML PKDD issue. *Data Mining and Knowledge Discovery*
3. C. Bielza, A. Salmerón, S. Moral (2015). Special issue on Recent Advances in Probabilistic Graphical Models. *International Journal of Intelligent Systems*
4. C. Bielza, P. Larrañaga (2014). Special issue on Bayesian Networks in Neuroscience. *Frontiers in Computational Neuroscience*

PHD COMMITTEES

- Ridho Rahmadi, Radboud University Nijmegen (2019)
- Dag Sonntag, Linköping University (2016)
- Marina Segura, Universidad Politécnica de Valencia (2015)
- Jerónimo Hernández, Universidad del País Vasco (2015)
- Iñigo Bermejo, Universidad Nacional de Educación a Distancia (2015)
- Ekhiñe Iruozqui, Universidad del País Vasco (2014)
- Angela Fernández Pascual, Universidad Autónoma de Madrid (2014)
- Nicolaj Søndberg-Jeppesen, Aalborg University (2009)
- Manuel Luque, Universidad Nacional de Educación a Distancia (2009)
- Dinora Morales, Universidad del País Vasco (2009)
- Constantino Malagón, Universidad Nebrija (2008)
- Domingo Romero, Universidad del País Vasco (2007)
- Roberto Santana, Universidad del País Vasco (2006)
- María Jesús Rufo, Universidad de Extremadura (2005)
- Rafael Rumí, Universidad de Almería (2003)
- Carmen Lacave, Universidad Nacional de Educación a Distancia (2003)
- Antonio Jiménez, Universidad Politécnica de Madrid (2002)
- Miguel Ángel Virto, Universidad Politécnica de Madrid (2002)
- Arminda Moreno, Universidad Politécnica de Madrid (2001)

INVITED SPEAKER IN UNIVERSITIES/INSTITUTIONS

- Chile: Northern Catholic University (2019)
- Denmark: Aalborg University (2009)
- Italy: Consiglio Nazionale delle Ricerche (1997)
- Germany: Spanish Embassy in Germany (Berlin) (2008), Cervantes Institute (Berlin) (2006)
- Greece: University of Patras (2010)
- Portugal: University of Aveiro (2009)
- South Korea: Seoul National University (2010)
- Spain: Spanish Open University (1998), Rey Juan Carlos University (2002, 2004, 2006, 2006), University of the Basque Country (2002, 2004), University of Sevilla (2004, 2007), University of Castilla - La Mancha (1998, 2010, 2011), University of Málaga (2012), Fiscal Studies Institute (2005, 2006, 2006), Carlos III Health Institute (2009), University Pablo de Olavide (2016)
- The Netherlands: Radboud University Nijmegen (2009, 2012)
- Tunisia: Institut Supérieur de Gestion de Tunis (Université de Tunis) (2008)
- United Kingdom: University of Essex (2009)
- United States of America: Institute of Statistics and Decision Sciences (Duke University, USA) (1996), University of Kansas (1997, 2000), Harvard Medical School (2005)

JOURNAL REFEREE:

1. Annals of Operations Research
2. Artificial Intelligence Review
3. Bioinformatics
4. Computational Intelligence
5. Computational Statistics and Data Analysis
6. Computers in Biology and Medicine
7. Computer Methods and Programs in Biomedicine
8. Decision Analysis
9. Decision Support Systems
10. Entropy
11. European Journal of Operational Research
12. Evolutionary Computation
13. Frontiers in Neuroanatomy
14. IEEE Access
15. IEEE Transactions on Evolutionary Computation
16. IEEE Transactions on Industrial Informatics
17. IEEE Transactions on Knowledge and Data Engineering
18. IEEE Transactions on Pattern Analysis and Machine Intelligence

19. Information Sciences
20. International Journal of Approximate Reasoning
21. International Journal of Intelligent Systems
22. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
23. Journal of Applied Statistics
24. Journal of Biomedical Informatics
25. Journal of Computational and Graphical Statistics
26. Journal of Computer Science and Technology
27. Journal of Neuroscience Methods
28. Journal of the Neurological Sciences
29. Machine Learning
30. Management Science
31. Medical Decision Making
32. Neurocomputing
33. Neuroinformatics
34. Pattern Recognition
35. PLOS Computational Biology
36. QÜESTIÓ (Quaderns d'Estadística i Investigació Operativa)
37. Shock and Vibration
38. The Scientific World Journal
39. TOP

BOOK PROPOSAL REVIEWER:

1. *Chapman & Hall/CRC Press*, 2013 and 2018

PLENARY TALKS IN CONFERENCES

1. Women in Data Science (WiDS-2017), Madrid (2017)
2. 8th European Conference on Data Mining 2014 (ECDM-2014) / 8th International Conference on Intelligent Systems and Agents 2014 (ISA-2014), Lisbon (2014)
3. 26th IEEE International Symposium on Computer-Based Medical Systems (CBMS), Porto (2013)
4. Sixth European Workshop on Probabilistic Graphical Models (PGM), Granada (2012)

ORGANIZER OF CONFERENCES AND SCIENTIFIC EVENTS

1. *Co-Chair of the Journal Track* (journals: Machine Learning, Data Mining and Knowledge Discovery), within The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD-2015), Porto, 2015
2. *Jornadas Científico-Técnicas y Seminario Doctoral de la Red ATICA (SEMÁTICA-2013)*, Madrid, 2013

3. Program Chair of the *XV Conference of the Spanish Association for the Artificial Intelligence (CAEPIA '13)*, Madrid, 2013
4. Session *Optimization and Data Mining* within XXV European Conference on Operational Research (EURO XXV - 2012), Vilnius, 2012
5. *IX Jornada de Seguimiento de Proyectos en Tecnologías Informáticas*, Madrid, 2010
6. Session *Optimization and Data Mining* within XXIV European Conference on Operational Research (EURO XXIV - 2010), Lisbon, 2010
7. *VIII Jornada de Seguimiento de Proyectos en Tecnologías Informáticas*, Madrid, 2009
8. *VII Jornada de Seguimiento de Proyectos en Tecnologías Informáticas*, Zaragoza, 2007
9. *Doctorado Interuniversitario "Modelos Probabilísticos para la Inteligencia Artificial y la Minería de Datos"*, San Lorenzo de El Escorial (Madrid), 2006
10. *Primera Reunión de la Red Temática sobre Modelos Gráficos Probabilísticos y Aplicaciones*, San Lorenzo de El Escorial (Madrid), 2006
11. *Workshop on Graphical Modelling of Dependent Uncertainties for Decision Support in Public Policy*, Gartmore (UK), 2004
12. Sessions *Graphical Models in Decision Analysis: Complex Applications* and *Graphical Models in Decision Analysis: Novel Representations and Algorithms* within EURO XV-INFORMS XXXIV, Barcelona, 1997

PROGRAM COMMITTEE MEMBER

1. 15th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2019), Belgrade, 2019
2. XVIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-2018), Granada, 2018
3. II Workshop en Big Data y Análisis de Datos Escalable (II BigDADE), Granada, 2018
4. 9th International Conference on Probabilistic Graphical Models (PGM'18), Prague, 2018
5. IX Congreso Internacional de Computación e Informática del Norte de Chile (INFONOR-2018), Iquique (Chile), 2018
6. International Workshop on Automatic Machine Learning (AutoML-2018) within the International Conference in Machine Learning, Stockholm (2018)
7. 4th IEEE International Conference on Data Science and Advanced Analytics (IEEE-DSAA-2017), Tokyo, 2017
8. 14th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2017), Lugano, 2017
9. 30th International Conference on Industrial, Engineering, Other Applications of Applied Intelligent Systems (IEA-AIE 2017). Special Track on "Graphical Models: from Theory to Applications", Arras (France), 2017
10. 15th Ibero-American Conference on Artificial Intelligence (IBERAMIA 2016), San José (Costa Rica), 2016
11. Workshop on Data Science for Social Good (SoGood 2016), within ECML-PKDD 2016, Riva del Garda (Italy), 2016
12. XVII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-2016), Salamanca, 2016

13. International Conference on Probabilistic Graphical Models (PGM-2016), Lugano, 2016
14. 22nd European Conference on Artificial Intelligence (ECAI-2016), The Hague, 2016
15. 25th International Joint Conference on Artificial Intelligence (IJCAI-16), New York, 2016
16. I Workshop “BigData y Análisis de Datos Escalable” (BigDADE-2015), Albacete, 2015
17. XVI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-2015), Albacete, 2015
18. Workshop on Adaptive Treatments and Therapies (WATT-2015), Istanbul, 2015
19. 2015 Genetic and Evolutionary Computation Conference (GECCO-2015), Madrid, 2015
20. 3rd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO-2015), Granada, 2015
21. Seventh European Workshop on Probabilistic Graphical Models (PGM’14), Utrecht, 2014
22. 21st European Conference on Artificial Intelligence (ECAI-2014), Prague, 2014
23. 2014 Genetic and Evolutionary Computation Conference (GECCO-2014), Vancouver, 2014
24. 15th Biennial European Conference of the Society for Medical Decision Making (ESMDM-2014), Antwerp, 2014
25. 2nd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO-2014), Granada, 2014
26. 23rd International Joint Conference on Artificial Intelligence (IJCAI-13), Beijing, 2013
27. 12th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2013), Utrecht, 2013
28. 2013 Genetic and Evolutionary Computation Conference (GECCO-2013), Amsterdam, 2013
29. IEEE Congress on Evolutionary Computation (IEEE CEC-2013), Cancún, 2013
30. International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO-2013), Granada, 2013
31. Sixth European Workshop on Probabilistic Graphical Models (PGM’12), Granada, 2012
32. 7th Conference on Prestigious Applications of Intelligent Systems (PAIS-2012), within ECAI-2012, Montpellier, 2012
33. 9th Bayesian Modelling Applications Workshop (within UAI-2012), Catalina Island, 2012
34. 28th Conference on Uncertainty in Artificial Intelligence (UAI-2012), Catalina Island, 2012
35. 2012 Genetic and Evolutionary Computation Conference (GECCO-2012), Philadelphia, 2012
36. IEEE Congress on Evolutionary Computation (IEEE CEC-2012), Brisbane, 2012
37. 4th Biennial European Conference of the Society for Medical Decision Making (ESMDM-2012), Oslo, 2012
38. International Conference on Pattern Recognition Applications and Methods (ICPRAM-2012), Algarve, 2012
39. XIV Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA’11), Tenerife, 2011
40. 22th International Joint Conference on Artificial Intelligence (IJCAI-11), Barcelona, 2011
41. 27th Conference on Uncertainty in Artificial Intelligence (UAI-2011), Barcelona, 2011

42. 2011 Genetic and Evolutionary Computation Conference (GECCO-2011), Dublin, 2011
43. Probabilistic Problem Solving in Biomedicine (ProBioMed'11), within 13th Conference on Artificial Intelligence in Medicine (AIME-2011), Bled, 2011
44. 13th International Conference on Discovery Science (DS-2010), Canberra, 2010
45. Fifth European Workshop on Probabilistic Graphical Models (PGM'10), Helsinki, 2010
46. 26th Conference on Uncertainty in Artificial Intelligence (UAI-2010), Catalina Island, 2010
47. 23rd International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA-AIE 2010), Special Session on "New Frontiers in Data Analysis, Optimization and Visualization for Bioinformatics and Neuroscience", Córdoba, 2010
48. 13th European Meeting of the Society for Medical Decision Making (ESMDM-2010), Tyrol, 2010
49. XIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-TTIA 2009), Sevilla, 2009
50. 12th International Conference on Discovery Science (DS-2009), Porto, 2009
51. European Conference on Machine Learning – Conference on Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2009), Bled, 2009
52. 21th International Joint Conference on Artificial Intelligence (IJCAI-09), Pasadena, 2009
53. 25th Conference on Uncertainty in Artificial Intelligence (UAI-2009), Montreal, 2009
54. 11th Ibero-American Conference on Artificial Intelligence (IBERAMIA 2008), Lisbon, 2008
55. Fourth European Workshop on Probabilistic Graphical Models (PGM'08), Hirtshals, 2008
56. IV International Symposium on Applications of Modelling as an Innovative Technology in the Agri-Food Chain (Model-IT 2008), Madrid, 2008
57. IFAC Conference on Cost Effective Automation in Networked Product Development and Manufacturing (IFAC-CEA-2007), Monterrey, 2007
58. 18th European Conference on Machine Learning (ECML) – 11th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD), Varsovia, 2007
59. 23th Conference on Uncertainty in Artificial Intelligence (UAI-2007), Vancouver, 2007
60. IADIS International Conference Intelligent Systems and Agents (ISA-2007), Lisbon, 2007
61. Third European Workshop on Probabilistic Graphical Models (PGM'06), Prague, 2006
62. 16th European Conference on Machine Learning (ECML) – 9th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD), Porto, 2005
63. Second European Workshop on Probabilistic Graphical Models (PGM'04), Leiden, 2004
64. 20th Conference on Uncertainty in Artificial Intelligence (UAI-2004), Banff, 2004
65. 14th European Conference on Machine Learning – 7th European Conference on Principles and Practice of Knowledge Discovery. Workshop on Probabilistic Graphical Models for Classification, Cavtat–Dubrovnik, 2003
66. 19th Conference on Uncertainty in Artificial Intelligence (UAI-2003), Acapulco, 2003
67. First European Workshop on Probabilistic Graphical Models (PGM'02), Cuenca, 2002
68. 17th Conference on Uncertainty in Artificial Intelligence (UAI-2001), Seattle, 2001
69. International Symposium on Adaptive Systems. Evolutionary Computation and Probabilistic Graphical Models (ISAS2001), La Habana, 2001

70. 16th Conference on Uncertainty in Artificial Intelligence (UAI-2000), Stanford, 2000

SESSION CHAIR OF CONFERENCES

1. Inference in *International Conference on Probabilistic Graphical Models (PGM'18)*, Prague, 2018
2. Dynamic Models in *International Conference on Probabilistic Graphical Models (PGM'16)*, Lugano, 2016
3. Learning in *22nd European Conference on Artificial Intelligence (ECAI-2016)*, The Hague, 2016
4. Probabilistic Graphical Models in *XVI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA '15)*, Albacete, 2015
5. Classification and Clustering in *Sixth European Workshop on Probabilistic Graphical Models (PGM'12)*, Granada, 2012
6. Optimization and Data Mining in *EURO XXV*, Vilnius, 2012
7. Machine Learning in *XIV Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA '11)*, Tenerife, 2011
8. Influence Diagrams in *Fifth European Workshop on Probabilistic Graphical Models (PGM'10)*, Helsinki, 2010
9. Optimization and Data Mining in *EURO XXIV*, Lisbon, 2010
10. Redes Bayesianas in *XIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-TTIA 2009)*, Sevilla, 2009
11. Statistical Data Analysis in *6th International Symposium on Intelligent Data Analysis (IDA'05)*, Madrid, 2005
12. Influence Diagrams and Decision Networks in *Second European Workshop on Probabilistic Graphical Models (PGM'04)*, Leiden, 2004
13. Influence Diagrams in *First European Workshop on Probabilistic Graphical Models (PGM'02)*, Cuenca, 2002
14. Computational Methods in Bayesian Statistics in *EURO XV-INFORMS XXXIV*, Barcelona, 1997
15. Graphical Models in Decision Analysis: Novel Representations and Algorithms, in *EURO XV-INFORMS XXXIV*, Barcelona, 1997

ROUND TABLES

1. “Welcome to the Future: Social and Human Impact of Artificial Intelligence” (50th anniversary of Universidad Autónoma de Madrid), CentroCentro Gallery at Cibeles, Madrid, 2018
2. “Collaborative Research in Computational Neuroscience USA-Spain”, Madrid, 2018
3. “Probabilistic Graphical Models and Neuroscience”, at 9th International Conference on Probabilistic Graphical Models (PGM-2018), Prague, 2018
4. “Women, Research and Artificial Intelligence”, at XVI Conference of the Spanish Association for Artificial Intelligence (CAEPIA-2015), Albacete, 2015

TUTORIALS

1. 14th Conference on Artificial Intelligence in Medicine, Murcia, 2013
2. XIV Conference of the Spanish Association for Artificial Intelligence, Tenerife, 2011
3. 12th International Conference on Discovery Science, Porto, 2009

MEMBER OF COMMITTEES EVALUATING SCIENTIFIC PROJECTS, GRANTS AND RESEARCH CAREERS

1. *Project Proposals for The Education University of Hong Kong*, Hong Kong (2018)
2. *Associate Professor Position (2 applicants)*, Linköping University (2018)
3. *Project Proposal within the International PostDoc Initiative (IPODI) Fellowship Program*, Technische Universität Berlin (2017)
4. *Evaluating Committee of 2016 R+D Projects of Young Researchers*, Spanish Ministry of Economy and Competitiveness, Madrid (2016)
5. *Assessment of Competences for a Full Professor*, Utrecht University (2016)
6. *Selection Committee of 2016 Program of PhD Scholarships*, Obra Social “la Caixa”, Barcelona (2016)
7. *Evaluating Committee of 2014 Juan de la Cierva Postdoctoral Contracts*, Spanish Ministry of Economy and Competitiveness, Madrid (2015)
8. *ICREA (Catalan Institution for Research and Advanced Studies)–Peer Evaluation for Promotion of Research Professors*, Barcelona (2015, 2016, 2017)
9. *Project Proposals for Czech Science Foundation*, Czech Republic (2015)
10. *Evaluating Committee of Computer Technology Projects*, Spanish Ministry of Economy and Competitiveness, Madrid (2015, 2016)
11. *Follow-up Commission for Computer Technology Projects*, Spanish Ministry of Economy and Competitiveness, Madrid (2014)
12. *Project Proposals for Junta de Andalucía*, Córdoba (2013)
13. *Project Proposals for Agence Nationale de la Recherche*, France (2012)
14. *Evaluating Committee to Certify R+D Industrial Projects*, Agencia de Acreditación de Proyectos de Investigación, Desarrollo e Innovación Tecnológica (AIDIT), Madrid (2012)
15. *Follow-up Commission for Computer Technology Projects*, Spanish Ministry of Science and Innovation, Madrid (2011)
16. *Associate Professor Position*, Aalborg University, Denmark (2010)
17. *Evaluating Committee of Computer Technology Projects*, Spanish Ministry of Science and Innovation, Madrid (2009, 2009, 2011)
18. *Project Proposals for Agencia Nacional de Evaluación y Prospectiva*, Madrid (2000, 2004, 2005 (2), 2006, 2007, 2008 (2), 2012 (2), 2014, 2015 (5), 2016 (2), 2017 (1))

SCIENCE DISSEMINATION

- *Redes Bayesianas y Clasificación Neuronal*, Investigación y Ciencia, Blog de Neurociencia Computacional (2019)
- *La Máquina que Descifra el Cerebro de Maradona*, El País–Retina 1, pp. 86–91 (2017)
- *Podrá Gestionarse el Riesgo de Ciertas Enfermedades*. El Mundo–YoDona pp. 30 (2017)
- *Data Science es una Tecnología Clave para la Investigación del Siglo XXI*, ABC and El Economista (2017)
- *Los Ladridos Caracterizan a los Perros Igual que la Voz a las Personas*. Madri+d News, Platform SINC (FECYT), AlphaGalileo, ABC (2015)
- *La Mente Artificial Aprende a Inventar*. El Correo Innova+, pp. 1–3 (2014)

- *Desarrollan un Kit que Predice la Supervivencia al Cáncer de Pulmón.* Madri+d News, Platform SINC (FECYT), AlphaGalileo, EuropaPress, 20minutos (2013)
- *Avances en el Pronóstico de la Cirugía de la Epilepsia.* Madri+d News, Física Hoy (2013)
- *La Inteligencia Computacional Abre Nuevas Vías en la Investigación del Alzheimer.* EuropaPress, Alzheimer Universal, AlphaGalileo, MathsNews, Fundación MonteMadrid (2012)
- *Alan Turing y la Estadística Bayesiana.* Blog El País newspaper (2012)
- *Inteligencia Artificial. Proyecto Cajal Blue Brain.* Interview in Radio3 of RNE (2011)
- *Predicen el Número de Citas que Tendrán los Artículos Científicos.* Madri+d News, Platform SINC (FECYT) (2010)

PATENTS

1. *Test Predictor de Supervivencia Global de Adenocarcinoma de Pulmón.* R. García, J.M. Paramio, P. Larrañaga, C. Bielza. P-2010-31626, Grant date: 4-26-2013

REGISTERED SOFTWARE

1. *Fidelización de Clientes a través de Internet.* Ríos-Insua, S., Bielza, C., Mateos, A., Martín, J. 103787, Registration date: 5-4-2001
2. Computer Program: *SimLin “Simulador del Comportamiento de una Línea de Clasificación de Fruta en Relación con la Aparición de Daños Mecánicos”.* Ruiz-Altisent, M., Barreiro, P., Bielza, C., García, F., García, F.J., Heradio, R., Pacios, O., Martín, J., Ríos-Insua, S., M-5928-02, Registration date: 6-30-2000
3. *Análisis de la Calidad en el Servicio.* Ríos-Insua, S., Bielza, C., Mateos, A., Martín, J., M-72228, Registration date: 3-26-1998, With effect from: 12-1-2003

MANAGING

- Academic Secretary of the Artificial Intelligence Department (Technical University of Madrid), May2007-Dic2008
- Member of Curriculum Itinerary Commission of Computer Science Studies (Technical University of Madrid), June2009-today
- Member of the Academic Planning Commission of Computer Science Studies (Technical University of Madrid), 2006-2008