

PROF. CONCHA BIELZA



A. GENERAL INFORMATION

PERSONAL INFORMATION

Name:	Concha Bielza
Birthdate:	April 16, 1966
Nationality:	Spanish
Address:	Department of Artificial Intelligence Universidad Politécnica de Madrid Campus de Montegancedo, s/n 28660 Boadilla del Monte, Madrid, Spain
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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 in Mathematics, specialization in Statistics and Operation Research, Complutense University of Madrid, Spain, 1989

OTHER

- Four research periods awarded by the Ministry of Education, Culture and Sports: 1995-2000, 2001-2006, 2007-2012, 2013-2018
- Five teaching periods awarded by the Technical University of Madrid: 1992-1996, 1997-2001, 2002-2006, 2007-2011, 2012-2016
- (Unique) Knowledge transfer and innovation period awarded by the Ministry of Science, Innovation and Universities: 2011-2018

RESEARCH INTEREST

My main research interests are: Machine Learning, 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), regularization, anomaly detection, data streams, application domains: medicine, reservoirs, auctions, project selection, industrial machining, astrophysics, agriculture, bioinformatics, bibliometry, neuroscience, industry 4.0, sports.

THE CV IN NUMBERS (Jan 24, 2021)

- Books: 6
 - Edited Books: 2
 - Journal Papers (Web of Science): 133
 - Journal Papers (Not in Web of Science): 15
 - Book Chapters: 42
 - Conference Publications: 61
 - Conference Contributions: 162 (24 invited + 138 accepted)
 - Technical Reports: 22
 - Awards: 8 (personal) + 18 (jointly granted)

 - Public Research Projects: 57
 - Private Research Projects: 25

 - Supervised Ph.D. Theses: 18
 - Supervised Master Theses: 36
 - Supervised Graduate Projects: 28

 - Editorial Board of Journals: 2
 - Editor of Journal Special Issues: 4
 - Journal Referee: 71 manuscripts in 45 journals
 - Plenary Talks in Conferences: 5
 - Organizer of Congress and Scientific Events: 13
 - Program Committee Member: 78
 - Session Chair of Conferences: 16
 - Round Tables: 4
 - Tutorials: 4
 - Member of Committees Evaluating Scientific Projects: 18
 - Member of Committees Evaluating Grants and Research Careers: 12
 - Patents: 1
 - Registered Software: 3
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CITATIONS AND *h*-INDEX

- Web of Science (24/1/21)
Citations: 2815
h-index: 24
Two Highly Cited Papers at Essential Science Indicators (top 1% of articles): papers #79 and #121
 - Google Scholar (24/1/21)
Citations: 6081
h-index: 35
i10-index: 107
Citations (since 2016): 3448
h-index (since 2015): 26
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B. PUBLICATION RECORD

BOOKS

1. Bielza, C., Larrañaga, P. (2020). *Data-Driven Computational Neuroscience. Machine Learning and Statistical Models*. Cambridge University Press. +700 pages
2. Larrañaga, P., Atienza, D., Diaz-Rozo, J., Ogbecchie, 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. Ballesteros, 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 (JCR - WEB OF SCIENCE)

1. B. Mihaljevic, P. Larrañaga, C. Bielza (2021). Comparing the electrophysiology and morphology of human and mouse layer 2/3 pyramidal neurons with Bayesian networks. *Frontiers in Neuroinformatics*, accepted
2. S. Gil-Begue, C. Bielza, P. Larrañaga (2021). Multi-dimensional Bayesian network classifiers: A survey. *Artificial Intelligence Review*, 54, 519-559
3. M. Michiels, P. Larrañaga, C. Bielza (2021). BayeSuites: An open web framework for massive Bayesian networks focused on neuroscience. *Neurocomputing*, 428, 166-181
4. D. Atienza, C. Bielza, J. Diaz-Rozo, P. Larrañaga (2020). Efficient anomaly detection in a laser surface heat treatment process by tracking the laser spot. *IEEE/ASME Transactions on Mechatronics*, DOI: 10.1109/TMECH.2020.3024613
5. F. Rodriguez-Sanchez, P. Larrañaga, C. Bielza (2020). Incremental learning of latent forests. *IEEE Access*, 8, 224420-224432
6. B. Mihaljević, P. Larrañaga, R. Benavides-Piccione, J. DeFelipe, C. Bielza (2020). Comparing basal dendrite branches in human and mouse hippocampal CA1 pyramidal neurons with Bayesian networks. *Scientific Reports*, 10, Article 18592
7. R. Yuste, M. Hawrylycz, N. Aalling, A. Aguilar-Valles, D. Arendt, R., Armananzas, G.A. Ascoli, C. Bielza, et al. (Copenhagen Convention Group) (2020). A community-based transcriptomics classification and nomenclature of neocortical cell types. *Nature Neuroscience*, 23, 1456-1468, Q1
8. I. Córdoba-Sánchez, G. Varando, C. Bielza, P. Larrañaga (2020). On generating random Gaussian graphical models. *International Journal of Approximate Reasoning*, 125, 240-250

9. I. Córdoba-Sánchez, C. Bielza, P. Larrañaga, G. Varando (2020). Sparse Cholesky covariance parametrization for recovering latent structure in ordered data. *IEEE Access*, 8, 154614-154624, Q1
10. J. Diaz-Rozo, C. Bielza, P. Larrañaga (2020). Machine-tool condition monitoring with Gaussian mixture models-based dynamic probabilistic clustering. *Engineering Applications of Artificial Intelligence*, 89, Article 103434, Q1
11. I. Córdoba-Sánchez, C. Bielza, P. Larrañaga (2020). A review of Gaussian Markov models for conditional independence. *Journal of Statistical Planning and Inference*, 206, 127-144, Q3
12. B. Mihaljević, R. Benavides-Piccione, C. Bielza, P. Larrañaga, J. DeFelipe (2019). Classification of GABAergic interneurons by leading neuroscientists. *Scientific Data*, 6, Article 221, Q1
13. P. Fernández-González, C. Bielza, P. Larrañaga (2019). Random forests for regression as a weighted sum of k-potential nearest neighbors. *IEEE Access*, 7, 1, 25660-25672, Q1
14. N. Benjumeda, S. Luengo-Sanchez, P. Larrañaga, C. Bielza (2019). Tractable learning of Bayesian networks from partially observed data. *Pattern Recognition*, 91, 190-199, Q1
15. S. Luengo-Sanchez, P. Larrañaga, C. Bielza (2019). A directional-linear Bayesian network and its application for clustering and simulation of neural somas. *IEEE Access*, 7, 1, 69907-69921, Q1
16. I. Leguey, P. Larrañaga, C. Bielza, S. Kato (2019). A circular-linear dependence measure under Johnson-Wehrly distributions and its application in Bayesian networks. *Information Sciences*, 486, 240-253, Q1
17. I. Leguey, C. Bielza, and P. Larrañaga (2019). Circular Bayesian classifiers using wrapped Cauchy distributions. *Data & Knowledge Engineering*, 122, 101-115, Q3
18. M. Benjumeda, C. Bielza, and P. Larrañaga (2019). Learning tractable Bayesian networks in the space of elimination orders. *Artificial Intelligence*, 274, 66-90, Q1
19. B. Mihaljević, C. Bielza and P. Larrañaga (2018). `bnclassify`: Learning Bayesian network classifiers. *The R Journal*, 10, 2, 455-468, Q1
20. 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, Q1
21. B. Mihaljević, P. Larrañaga, R. Benavides-Piccione, S. Hill, J. DeFelipe, C. Bielza (2018). Towards a supervised classification of neocortical interneuron morphologies, *BMC Bioinformatics*, 19, 511, Q1
22. 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, Q1
23. 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, Q1
24. 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, Q1
25. M. Benjumeda, C. Bielza, and P. Larrañaga (2018). Tractability of most probable explanations in multidimensional Bayesian network classifiers. *International Journal of Approximate Reasoning*, 93, 74-87, Q3
26. J. Mu, K.R. Chaudhuri, C. Bielza, J. de Pedro-Cuesta, P. Larrañaga, P. Martinez-Martin (2017). Parkinson's disease subtypes from cluster analysis of motor and non-motor symptoms. *Frontiers in Aging Neuroscience*, 9, Article 301, Q2

27. L. Anton-Sanchez, P. Larrañaga, R. Benavides-Piccione, I. Fernaud-Espinosa, J. DeFelipe, C. Bielza (2017). Three-dimensional spatial modeling of spines along dendritic networks in human cortical pyramidal neurons. *PLoS ONE*, 12, 6, e0180400, Q2
28. L. Anton-Sanchez, C. Bielza, P. Larrañaga (2017). Network design through forests with degree- and role-constrained minimum spanning trees. *Journal of Heuristics*, 23 (1), 31-51, Q2
29. 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, Q1
30. 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, Q1
31. 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, Q2
32. 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, Q1
33. Leguey, I., Bielza, C., Larrañaga, P., Kastanauskaite, A., Rojo, C., Benavides-Piccione, R., 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, Q1
34. Leitner, F., Bielza, C., Hill, S.L., Larrañaga, P. (2016). Data publications correlate with citation impact. *Frontiers in Neuroscience*, 10, Article 419, Q2
35. 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, Q1
36. 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, Q4
37. 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, Q1
38. Varando, G., Bielza, C., Larrañaga, P. (2015). Decision boundary for discrete Bayesian network classifiers. *Journal of Machine Learning Research*, 16, 2725-2749, Q1
39. 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, Q1
40. 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, Q2
41. 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, Q1
42. 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, Q1
43. 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, Q1
44. 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, Q1

45. Bielza, C., Moral, S., Salmerón, A. (2015). Recent advances in probabilistic graphical models. Editorial. *International Journal of Intelligent Systems*, 30, 3, 207-208, Q2
46. 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, Q2
47. 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, Q2
48. 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, Q4
49. López-Cruz, P.L., Bielza, C., Larrañaga, P. (2015). Directional naive Bayes classifiers. *Pattern Analysis and Applications*, 18, 225-246, Q3
50. 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, Q1
51. Karshenas, H., Bielza, C., Larrañaga, P. (2015). Interval-based ranking in noisy evolutionary multi-objective optimization. *Computational Optimization and Applications*, 61, 2, 517-555, Q1
52. 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, Q2
53. Bielza, C., Larrañaga, P. (2014). Bayesian networks in neuroscience: A survey. *Frontiers in Computational Neuroscience*, 8, Article 131, Q2
54. 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, Q1
55. 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, Q1
56. Morales, J., Benavides-Piccione, R., Dar, M., Feraud, 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, Q1
57. Bielza, C., Larrañaga, P. (2014). Discrete Bayesian network classifiers: A survey. *ACM Computing Surveys*, 47, 1, Article 5 (43 pages), Q1
58. 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, Q1
59. 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, Q2
60. Guerra, L., Bielza, C., Robles, V., Larrañaga, P. (2014). Semi-supervised projected model-based clustering. *Data Mining and Knowledge Discovery*, 28, 4, 882-917, Q1
61. 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, Q2
62. 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, Q1

63. 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, Q1
64. Read, J., Bielza, C., Larrañaga, P. (2014). Multi-dimensional classification with super-classes. *IEEE Transactions on Knowledge and Data Engineering*, 26, 7, 1720-1733, Q1
65. 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, Q1
66. 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, Q2
67. Vidaurre, D., van Gerven M., Bielza, C., Larrañaga, P., Heskes, T. (2013). Bayesian sparse partial least squares. *Neural Computation*, 25, 12, 3318-3339, Q2
68. Ibáñez, A., Larrañaga, P., Bielza, C. (2013). Cluster methods for assessing research performance: Exploring Spanish computer science. *Scientometrics*, 97, 571-600, Q1
69. 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, Q4
70. 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, Q2
71. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). A survey of L_1 regression. *International Statistical Review*, 81, 3, 361-387, Q2
72. 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, Q3
73. 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, Q4
74. 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, Q1
75. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). Sparse regularized local regression. *Computational Statistics and Data Analysis*, 62, 122-135, Q2
76. 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, Q2
77. Vidaurre, D., Bielza, C., Larrañaga, P. (2013). Classification of neural signals from sparse autoregressive features. *Neurocomputing*, 111, 21-26, Q1
78. 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, Q1
79. 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, Q1

→ Highly Cited Paper at Essential Science Indicators (top 1% of articles by total citations in discipline Neuroscience & Behavior)

80. 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, Q2
81. 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, Q1
82. Karshenas, H., Santana, R., Bielza, C., Larrañaga, P. (2013). Regularized continuous estimation of distribution algorithms. *Applied Soft Computing*, 13, 2412-2432, Q1
83. 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, Q2
84. 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, Q1
85. 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, Q2
86. 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, Q1
87. 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, Q1
88. 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, Q1
89. 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, Q1
90. 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, Q1
91. Maojo, V., García-Remesal, M., Bielza, C., Crespo, J., Pérez-Rey, D., Kulikowski, C. (2012). Biomedical informatics publications: A global perspective. Part II: Journals. *Methods of Information in Medicine*, 51, 2, 131-137, Q1
92. 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, Q1
93. 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, Q1
94. 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, Q4
95. Vidaurre, D., Bielza, C., Larrañaga, P. (2012). Lazy lasso for local regression. *Computational Statistics*, 27, 3, 531-550, Q4

96. 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, Q2
97. 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, Q1
98. Bielza, C., Li, G., Larrañaga, P. (2011). Multi-dimensional classification with Bayesian networks. *International Journal of Approximate Reasoning*, 52, 705-727, Q1
99. 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, Q1
100. Fernández del Pozo, J.A., Bielza, C. (2011). Dealing with complex queries in decision support systems. *Data & Knowledge Engineering*, 70, 167-181, Q2
101. 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, Q1
102. Santana, R., Bielza, C., Larrañaga, P. (2011). Optimizing brain networks topologies using multi-objective evolutionary computation. *Neuroinformatics*, 9, 3-19, Q1
103. 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, Q1
104. Borchani, H., Larrañaga, P., Bielza, C. (2011). Classifying evolving data streams with partially labelled data. *Intelligent Data Analysis*, 15, 655-670, Q4
105. 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, Q2
106. 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, Q1
107. 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, Q1
108. 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, Q1
109. Bielza, C., Gómez, M., Shenoy, P.P. (2010). Modelling challenges with influence diagrams: Constructing probability and utility models. *Decision Support Systems*, 49, 354-364, Q1
110. Santana, R., Bielza, C., Larrañaga, P., Lozano, J.A., Echegoyen, C., Mendiburu, A., Armañanzas, A., Shakyia, S. (2010). MATEDA 2.0: Estimation of distribution algorithms in MATLAB. *Journal of Statistical Software*, 35, 7, 1-30, Q1
111. Vidaurre, D., Bielza, C., Larrañaga, P. (2010). Learning an L1-regularized Gaussian Bayesian network in the equivalence class space. *IEEE Transactions on Systems, Man and Cybernetics, Part B*, 40, 5, 1231-1242, Q1
112. Bielza, C., Fernández del Pozo, J.A., Larrañaga, P., Bengoetxea, E. (2010). Multidimensional statistical analysis of the parameterization of a genetic algorithm for the optimal ordering of tables. *Expert Systems with Applications*, 37, 804-815, Q1

113. Ibáñez, A., Larrañaga, P., Bielza, C. (2009). Predicting citation count of Bioinformatics papers within four years of publication. *Bioinformatics*, 25, 24, 3303-3309, Q1
114. I. Cuesta, C. Bielza, P. Larrañaga, M. Cuenca-Estrella, F. Laguna, D. Rodriguez-Pardo, B. Almirante, A. Pahissa, J. Rodriguez-Tudela (2009). Data mining validation of fluconazole breakpoints established by the European committee on antimicrobial susceptibility testing. *Antimicrobial Agents and Chemotherapy*, 53 (7), 2949-2954, Q1
115. C. Bielza, V. Robles, P. Larrañaga (2009). Estimation of distribution algorithms as logistic regression regularizers of microarray classifiers. *Methods of Information in Medicine*, 48 (3), 236-241, Q2
116. M. Correa, C. Bielza, J. Pamies-Teixeira (2009). Comparison of Bayesian networks and artificial neural networks for quality detection in a machining process. *Expert Systems with Applications*, 36, 7270-7279, Q1
117. Robles, V., Bielza, C., Larrañaga, P., González, S., Ohno-Machado, L. (2008). Optimizing logistic regression coefficients for discrimination and calibration using estimation of distribution algorithms. *TOP*, 16, 345-366, Q3
118. Correa, M., Bielza, C., Ramírez, M. de J., Alique, J.R. (2008). A Bayesian network model for surface roughness prediction in the machining process. *International Journal of Systems Science*, 39, 1181-1192, Q3
119. Bielza, C., Fernández del Pozo, J.A., Lucas, P. (2008). Explaining clinical decisions by extracting regularity patterns. *Decision Support Systems*, 44, 397-408, Q1
120. Gómez, M., Bielza, C., Fernández del Pozo, J.A., Ríos-Insua, S. (2007). A graphical decision-theoretic model for neonatal jaundice. *Medical Decision Making*, 27, 3, 250-265, Q1
121. Larrañaga, P., Calvo, B., Santana, R., Bielza, C., Galdiano, J., Inza, I., Lozano, J.A., Armañanzas, R., Santafé, G., Pérez, A., Robles, V. (2006). Machine learning in bioinformatics. *Briefings in Bioinformatics* 17, 1, 86-112, Q1
→ Highly Cited Paper at Essential Science Indicators (top 1% of articles by total citations in discipline Computer Science)
122. Ballesteros, E., Bielza, C., Pla-Santamaría, D. (2006). A decision approach to competitive electronic sealed-bid auctions for land. *Journal of the Operational Research Society*, 57, 1126-1133, Q3
123. Martín, J., Bielza, C., Ríos Insua, D. (2005). Approximating nondominated sets in continuous multiobjective optimization problems. *Naval Research Logistics*, 52, 5, 469-480, Q2
124. Fernández del Pozo, J.A., Bielza, C., Gómez, M. (2005). A list-based compact representation for large decision tables management. *European Journal of Operational Research*, 160, 3, 638-662, Q2
125. Gómez, M., Bielza, C. (2004). Node deletion sequences in influence diagrams using genetic algorithms. *Statistics & Computing*, 14, 3, 181-198, Q2
126. Bielza, C., Barreiro, P., Rodríguez-Galiano, M.I., Martín, J. (2003). Logistic regression for simulating damage occurrence on a fruit grading line. *Computers & Electronics in Agriculture*, 39, 2, 95-113, Q2
127. Ballesteros, E., Antón, J.M., Bielza, C. (2003). Compromise-based approach to road project selection in Madrid metropolitan area. *Journal of the Operations Research Society of Japan*, 46, 1, 99-122, Q4
128. Fernández del Pozo, J.A., Bielza, C., Gómez, M. (2001). Knowledge organisation in a neonatal jaundice decision support system. *Lecture Notes in Computer Science*, 2199, 88-94, Q3
129. Bielza, C., Gómez, M., Ríos-Insua, S., Fernández del Pozo, J.A. (2000). Structural, elicitation and computational issues faced when solving complex decision making problems with influence diagrams. *Computers and Operations Research*, 27, 7-8, 725-740, Q2
130. Bielza, C., Ríos-Insua, S., Gómez, M. (1999). Influence diagrams for neonatal jaundice management. *Lecture Notes in Artificial Intelligence*, 1620, 138-142, Q2

131. Bielza, C., Shenoy, P.P. (1999) A comparison of graphical techniques for asymmetric decision problems. *Management Science*, 45, 11, 1552-1569, Q1
132. Bielza, C., Müller, P., Ríos Insua, D. (1999). Decision analysis by augmented probability simulation. *Management Science*, 45, 7, 995-1007, Q1
133. Vidakovic, B., Bielza Lozoya, C. (1998). On time-dependent wavelet denoising. *IEEE Transactions on Signal Processing*, 46, 9, 2549-2554, Q1

JOURNAL PAPERS (NOT IN JCR)

1. I. Leguey, R. Benavides-Piccione, C. Rojo, P. Larrañaga, C. Bielza, J. DeFelipe (2018). Patterns of dendritic basal field orientation of pyramidal neurons in the rat somatosensory cortex. *eNeuro*, 5, 6, e0142, 1-13
2. J. Díaz-Rozo, C. Bielza, P. Larrañaga (2017). Machine learning-based CPS for clustering high throughput machining cycle conditions. *Procedia Manufacturing* 10, 997-1008
3. P. Fernandez-Gonzalez, C. Bielza, P. Larrañaga (2017). Univariate and bivariate truncated von Mises distributions. *Progress in Artificial Intelligence*, 6, 2, 171-180
4. Ibáñez, A., Armañanzas, A., Bielza, C., Larrañaga, P. (2016). Genetic algorithms and Gaussian Bayesian networks to uncover the predictive core set of bibliometric indices. *Journal of the American Society for Information Science and Technology*, 67, 7, 1703-1721
5. M. Benjumeda, C. Bielza, P. Larrañaga (2016). Learning Bayesian networks with low inference complexity. *Progress in Artificial Intelligence*, 5, 1, 15-26
6. Borchani, H., Bielza, C., Martínez-Martín, P., Larrañaga, P. (2014). Predicting EQ-5D from the Parkinson's disease Questionnaire PDQ-8 using multi-dimensional Bayesian network classifiers. *Biomedical Engineering: Applications, Basis and Communications*, 26, 1, 1450015
7. P. Larrañaga and C. Bielza (2012). Alan Turing and Bayesian statistics. *Mathware & Soft Computing Magazine*, 19 (2), 23-24
8. P. Larrañaga, C. Bielza, J. DeFelipe (2012). Alan Turing y la neurociencia. *Mente y Cerebro*, 57, 49-51
9. D. Vidaurre, C. Bielza, P. Larrañaga (2012). Forward stagewise naive Bayes. *Progress in Artificial Intelligence*, 1, 57-69
10. R. Armañanzas, I. Inza, R. Santana, Y. Saeys, J.L. Flores, J.A. Lozano, Y. Van de Peer, R. Blanco, V. Robles, C. Bielza, P. Larrañaga (2008). A review of estimation of distribution algorithms in bioinformatics. *BioDataMining*, 1, 6, 1-12
11. Gómez, M., Bielza, C., Ríos-Insua, S., Fernández del Pozo, J.A. (2002). Sistema IctNeo de ayuda a la decisión para el tratamiento de la ictericia neonatal. *Boletín de la Sociedad de Estadística e Investigación Operativa*, 18, 1, 20-26
12. Barreiro, P., Ruiz-Altisent, M., García, F., Bielza, C. (2001). Desarrollo de un instrumento de ayuda a la decisión para la mejora de las líneas de confección. *Agrícola Vergel*, 236, 2, 425-429
13. Bielza, C. (2000). Putting Bayesian decision analysis into practice. *ISBA Bulletin*, 7, 2, 11-12
14. Mateos, A., Ríos-Insua, S., Bielza, C., Gómez, M., García-Barreno, P., Sánchez Luna, M., Blanco, D. (1998). Applications of decision analysis to extracorporeal membrane oxygenation. *Revista de la Real Academia de Ciencias*, 92, 4, 317-322
15. Bielza, C., Gómez, M., Ríos-Insua, S., Fernández del Pozo, J.A., García-Barreno, P., Caballero, S., Sánchez Luna, M. (1998). IctNeo system for jaundice management. *Revista de la Real Academia de Ciencias*, 92, 4, 307-315

BOOK CHAPTERS

1. I. Córdoba, G. Varando, C. Bielza, P. Larrañaga (2018). A fast Metropolis-Hastings method for generating random correlation matrices. *Lecture Notes in Computer Science*, 11314, 117–124. Springer
2. S. Gil-Begue, P. Larrañaga, C. Bielza (2018). Multi-dimensional Bayesian network classifier trees. *Lecture Notes in Computer Science*, 11314, 354–363. Springer
3. I. Córdoba-Sánchez, E.C. Garrido-Merchán, D. Hernández-Lobato, C. Bielza, P. Larrañaga (2018). Bayesian optimization of the PC algorithm for learning Gaussian Bayesian networks. *Lecture Notes in Artificial Intelligence*, 11160, 44–54. Springer
4. C. Puerto-Santana, C. Bielza, P. Larrañaga (2018). Asymmetric hidden Markov models with continuous variables. *Lecture Notes in Artificial Intelligence*, 11160, 98–107. Springer
5. Ogbechie, A., Díaz-Rozo, A., Larrañaga, P., Bielza, C. (2017). Dynamic Bayesian network-based anomaly detection for in-process visual inspection of laser surface heat treatment. *Machine Learning for Cyber Physical Systems*, 17-24, Springer
6. Leguey, I., Bielza, C., Larrañaga, P. (2016). Tree-structured Bayesian networks for wrapped Cauchy directional distributions. *Lecture Notes in Artificial Intelligence*, 9868, 207–216. Springer
7. Luengo-Sanchez, S., Bielza, C., Larrañaga, P. (2016). Hybrid Gaussian and von Mises model-based clustering. *Frontiers in Artificial Intelligence and Applications Series*, 285, 855–862. IOS Press
8. Atienza, D., Bielza, C., Diaz, J., Larrañaga, P. (2016). Anomaly detection with a spatio-temporal tracking of the laser spot. *Frontiers in Artificial Intelligence and Applications Series*, 284, 137–142, IOS Press
9. Diaz, J., Bielza, C., Ocaña, J.L., Larrañaga, P. (2016). Development of a cyber-physical system based on selective Gaussian naive Bayes model for a self-predict laser surface heat treatment process control. *Machine Learning for Cyber Physical Systems*, 1–8, Springer
10. Rodriguez-Lujan, L., Bielza, C., Larrañaga, P. (2015). Regularized multivariate von Mises distribution. *Lecture Notes in Artificial Intelligence*, 9422, 25–35. Springer
11. Córdoba-Sánchez, I., Bielza, C., Larrañaga, P. (2015). Towards Gaussian Bayesian Network Fusion. *Lecture Notes in Artificial Intelligence*, 9161, 519–528. Springer
12. Varando, G., Bielza, C., Larrañaga, P. (2014). Expressive power of binary relevance and chain classifiers based on Bayesian networks for multi-label classification. *Lecture Notes in Artificial Intelligence*, 8754, 519–534. Springer
13. Bielza, C. (2014). 28 entries in the *Concise Encyclopaedia of Bioinformatics and Computational Biology* (second edition), J. Hancock and M.J. Zvelebil (eds.). Wiley
14. Mihaljević, B., Larrañaga, P., Bielza, C. (2013). Augmented semi-naive bayes classifier. *Advances in Artificial Intelligence, Lecture Notes in Artificial Intelligence*, 8109, 159–167. Springer
15. Lopez-Cruz, P.L., Nielsen, T.D., Bielza, C., Larrañaga, P. (2013). Learning mixtures of polynomials of conditional densities from data. *Advances in Artificial Intelligence, Lecture Notes in Artificial Intelligence*, 8109, 363–372. Springer
16. Lopez-Cruz, P.L., Bielza, C., Larrañaga, P. (2013). Learning conditional linear gaussian classifiers with probabilistic class labels. *Advances in Artificial Intelligence, Lecture Notes in Artificial Intelligence*, 8109, 139–148. Springer
17. Guerra, L., Benavides-Piccione, R., Bielza, C., Robles, V., DeFelipe, J., Larrañaga, P. (2013). Semi-supervised projected clustering for classifying GABAergic interneurons. *Lecture Notes in Artificial Intelligence*, 7885, 156–165. Springer
18. Karshenas, H., Santana, R., Bielza, C., Larrañaga, P. (2012). Continuous estimation of distribution algorithms based on factorized Gaussian Markov networks. *Markov Networks in Evolutionary Computation. Adaptation, Learning, and Optimization Series*, 14, 157-173. Springer

19. López-Cruz, P.L., Bielza, C., Larrañaga, P. (2011). The von Mises naive Bayes classifier for angular data. *Lecture Notes in Artificial Intelligence*, 7023, 145-154. Springer
20. Karshenas, H., Santana, R., Bielza, C., Larrañaga, P. (2011). Multi-objective optimization with joint probabilistic modeling of objectives and variables. *Lecture Notes in Computer Science*, 6576, 298-312. Springer
21. Santana, R., Bielza, C., Larrañaga, P. (2010). Synergies between network-based representation and probabilistic graphical models for classification, inference and optimization problems in neuroscience. *Lecture Notes in Artificial Intelligence*, 6098, 149-158. Springer
22. Borchani, H., Larrañaga, P., Bielza, C. (2010). Mining concept-drifting data streams containing labeled and unlabeled instances. *Lecture Notes in Artificial Intelligence*, 6096, 531-540. Springer
23. Santana, R., Bielza, C., Larrañaga, P. (2010). Using probabilistic dependencies improves the search of conductance-based compartmental neuron models. *Lecture Notes in Computer Science*, 6023, 170-181. Springer
24. Díaz, E., Ponce-de-León, E., Larrañaga, P., Bielza, C. (2009). Probabilistic graphical Markov model learning: An adaptive strategy. *Lecture Notes in Artificial Intelligence*, 5845, 225-236. Springer
25. López, M., Bielza, C., Sarro, L.M. (2006). Bayesian classifiers for variable stars. *Astronomical Data Analysis Software and Systems XV*, 351, 161-164. Astronomical Society of the Pacific Conference Series
26. Gómez, M., Fernández del Pozo, J.A., Bielza, C., Ríos-Insua, S. (2004). Gestión de la ictericia neonatal. *La Aventura de Decidir: Una Aproximación Científica mediante Casos Reales*, 73-94. Universidad de Málaga
27. Puch, R.O., Smith, J.Q., Bielza, C. (2004). Hierarchical junction trees: conditional independence preservation and forecasting in dynamic Bayesian networks with heterogeneous evolution. *Advances in Bayesian Networks, Studies in Fuzziness and Soft Computing*, 146, 57-76. Springer
28. Bielza, C., Fernández del Pozo, J.A., Lucas, P. (2004). Optimal decision explanation by extracting regularity patterns. *Research and Development in Intelligent Systems XX*, 283-294. Springer
29. Bielza, C., Ríos-Insua, S. (2003). Análisis de decisiones clínicas. *Manual de Informática Médica*, 467-491. Menarini - Caduceo Multimedia
30. Bielza, C., Fernández del Pozo, J.A., Lucas, P. (2003). Finding and explaining optimal treatments. *Lecture Notes in Artificial Intelligence*, 2780, 299-303. Springer
31. Fernández del Pozo, J.A., Bielza, C. (2002). An interactive framework for open queries in decision support systems. *Lecture Notes in Artificial Intelligence*, 2527, 254-264. Springer
32. Martín, J., Bielza, C. (2001). Aplicación de técnicas de simulación al análisis de decisiones: Estudio de una línea de clasificación de frutas. *Gestão da Tecnologia Empresarial e da Informação: Conceitos e Estudos de Casos*, 181-194. Editora Internet
33. Ríos-Insua, S., Gómez, M., Bielza, C., Fernández del Pozo, J.A. (2000). Implementation of IctNeo: a decision support system for jaundice management. *Operations Research Proceedings 1999, Gesellschaft für Operations Research e.V.*, 554-559. Springer
34. Bielza, C., Ríos-Insua, S., Gómez, M., Fernández del Pozo, J.A. (2000). Sensitivity analysis in IctNeo. *Robust Bayesian Analysis, Lecture Notes in Statistics*, 152, 317-334. Springer
35. Gómez, M., Ríos-Insua, S., Bielza, C., Fernández del Pozo, J.A. (2000). Multiattribute utility analysis in the IctNeo system. *Research and Practice in Multiple Criteria Decision Making, Lecture Notes in Economics and Mathematical Systems*, 487, 81-92. Springer
36. Ríos-Insua, S., Bielza, C., Gómez, M., Fernández del Pozo, J.A., Sánchez Luna, M., Caballero, S. (1998). An intelligent decision system for jaundice management in newborn babies. *Applied Decision Analysis*, 133-144. Kluwer

37. Bielza, C., Ríos Insua, D. (1998). Modelos gráficos para la toma de decisiones. *Sistemas Expertos Probabilísticos, Colección Ciencia y Técnica*, 20, 163–185. Eds. de la Universidad de Castilla - La Mancha
38. Ríos Insua, D., Bielza, C., Martín, J., Salewicz, K.A. (1998). Intelligent decision support for reservoir operations. *Applied Decision Analysis*, 63–72. Kluwer
39. Ríos Insua, D., Bielza, C., Martín, J., Salewicz, K. (1997). BayRes: a system for stochastic multiobjective reservoir operations. *Advances in Multiple Objective and Goal Programming, Lecture Notes in Economics and Mathematical Systems*, 455, 319–327. Springer
40. Ríos Insua, D., Salewicz, K.A., Müller, P., Bielza, C. (1997). Bayesian methods in reservoir operations: The zambezi river case. *The Practice of Bayesian Analysis*, 107–130. Arnold
41. Bielza, C., Ríos Insua, D., Ríos-Insua, S. (1996). Influence diagrams under partial information. *Bayesian Statistics 5*, 491–497. Oxford U.P.
42. Ríos-Insua, S., Mateos, A., Bielza, C. (1994). Teoría de la utilidad e inteligencia artificial. *Fronteras de la Informática*, 169–189. Real Academia de Ciencias

CONFERENCE PUBLICATIONS

1. N. Bernaola, M. Michiels, C. Bielza, P. Larrañaga (2020). BayesSuites: An openweb framework for visualization of massive Bayesian networks. *10th International Conference on Probabilistic Graphical Models. Proceedings of Machine Learning Research*
2. N. Bernaola, P. Larrañaga, C. Bielza (2019). Using Bayesian networks for differential analysis of gene regulatory networks. *3rd HBP Student Conference on “Interdisciplinary Brain Research”*
3. B. Mihaljević, C. Bielza, and P. Larrañaga (2019). Multivariate comparison of human and mouse pyramidal cell dendritic morphologies. *3rd HBP Student Conference on “Interdisciplinary Brain Research”*
4. B. Mihaljević, C. Bielza, P. Larrañaga (2018). Learning Bayesian network classifiers with completed partially directed acyclic graphs. *Ninth International Conference on Probabilistic Graphical Models. Proceedings of Machine Learning Research*, 72, 272–283
5. F. Rodriguez-Sanchez, P. Larrañaga, C. Bielza (2018). Discrete model-based clustering with overlapping subsets of attributes. *Ninth International Conference on Probabilistic Graphical Models. Proceedings of Machine Learning Research*, 72, 392–403
6. I. Córdoba-Sánchez, G. Varando, C. Bielza, P. Larraña (2018). A partial orthogonalization method for simulating covariance and concentration graph matrices. *Ninth International Conference on Probabilistic Graphical Models. Proceedings of Machine Learning Research*, 72, 61–72
7. M. Benjumbeda, S. Luengo-Sanchez, P. Larrañaga, C. Bielza (2018). Bounding the complexity of structural expectation-maximization. *Workshop on Tractable Probabilistic Models (TPM-2018) within the 35th ICML*, 1–3
8. G. Varando, C. Bielza, P. Larrañaga (2018). MultiMap: An application to visualize, edit and analyze spatial data. *2nd HBP Student Conference on “Transdisciplinary Research Linking Neuroscience, Brain Medicine and Computer Science”*
9. J. Mesonero, C. Bielza, P. Larrañaga (2017). Architecture for anomaly detection in a laser heating surface process. *Proceedings of 22nd IEEE International Conference on Emerging Technologies And Factory Automation (ETFA-2017). Workshop on Cyber-Physical Systems and Smart Networked Systems*, 1-4
10. I. Leguey, S. Kato, C. Bielza, P. Larrañaga (2017). Hybrid mutual information. *Proceedings of Advances in Directional Statistics. The Second Triennial Workshop (ADISTA-17)*, 47

11. S. Luengo-Sanchez, C. Bielza, P. Larrañaga (2017). Directional-linear data clustering using structural expectation-maximization algorithm. *Proceedings of Advances in Directional Statistics. The Second Triennial Workshop (ADISTA-17)*, 48–49
12. P. Fernández-González, P. Larrañaga, C. Bielza (2016). Bayesian Gaussian networks for multidimensional classification of morphologically characterized neurons in the NeuroMorpho repository. *Proceedings of the XVII Conference of the Spanish Association for the Artificial Intelligence (CAEPIA-2016)*, 39–48
13. M. Benjumbeda, C. Bielza, P. Larrañaga (2016). Learning tractable multidimensional Bayesian network classifiers. *Proceedings of the Eighth International Conference on Probabilistic Graphical Models. JMLR Workshop and Conference Proceedings*, 52, 13–24
14. M. Benjumbeda, P. Larrañaga, C. Bielza (2015). Learning low inference complexity Bayesian networks. *Proceedings of the XVI Conference of the Spanish Association for the Artificial Intelligence (CAEPIA-2015)*, 11–20
15. B. Mihaljević, C. Bielza, P. Larrañaga (2013). BayesClass: An R package for learning Bayesian network classifiers. *Proceedings of UseR! –The R User Conference 2013*, 53
16. L. Antón-Sánchez, C. Bielza, P. Larrañaga, P. (2013). Towards optimal neuronal wiring through estimation of distribution algorithms. *Companion Proceedings of the 15th Annual Genetic and Evolutionary Computation Conference (GECCO-2013)*, 1647–1650, ACM Digital Library
17. P.L. López-Cruz, C. Bielza, P. Larrañaga (2012). Learning mixtures of polynomials from data using B-spline interpolation. *Sixth European Workshop on Probabilistic Graphical Models*, 211–218, DECSAI-University of Granada
18. R. Santana, C. Bielza, P. Larrañaga (2012). Maximizing the number of polychronous groups in spiking networks. *Companion Material Proceedings of the 14th Annual Genetic and Evolutionary Computation Conference (GECCO-2012)*, 1499–1500, ACM Digital Library
19. R. Santana, C. Bielza, P. Larrañaga (2011). An ensemble of classifiers with multiple sources of information for MEG data. *Proceedings of the MEG Mind Reading Challenge of the International Conference on Artificial Neural Networks (ICANN-2011)*, 25–30
20. A. Ibáñez, P. Larrañaga, C. Bielza (2011). Predicting the h-Index with cost-sensitive naive Bayes. *Proceedings of the 11th International Conference on Intelligent Systems Design and Applications (ISDA-2011)*, 599–604, IEEE Publishers
21. H. Borchani, C. Bielza, and P. Larrañaga (2011). Learning multi-dimensional Bayesian network classifiers using Markov blankets: A case study in the prediction of HIV protease inhibitors. *Workshop on Probabilistic Problem Solving in Biomedicine (AIME2011)*, 29–40
22. D. Morales, C. Bielza, and P. Larrañaga (2011). Spatial clustering analysis of functional magnetic resonance imaging data. *Proceedings of the Fields-MITACS Conference on Mathematics of Medical Imaging*, poster abstract 1.4
23. J. H. Zaragoza, E. Sucar, E. F. Morales, C. Bielza, P. Larrañaga (2011). Bayesian chain classifiers for multidimensional classification. *Proceedings of the 22nd International Joint Conference on Artificial Intelligence (IJCAI-2011)*, 2192–2197, AAAI Press
24. R. Santana, H. Karshenas, C. Bielza, P. Larrañaga (2011). Quantitative genetics in multi-objective optimization algorithms: From useful insights to effective methods. *Proceedings of the 13th Annual Genetic and Evolutionary Computation Conference (GECCO-2011)*, 91–92, ACM Digital Library
25. R. Santana, H. Karshenas, C. Bielza, P. Larrañaga (2011). Regularized k -order Markov models in EDAs. *Proceedings of the 13th Annual Genetic and Evolutionary Computation Conference (GECCO-2011)*, 593–600, ACM Digital Library
26. R. Santana, C. Bielza, P. Larrañaga (2011). Affinity propagation enhanced by estimation of distribution algorithms. *Proceedings of the 13th Annual Genetic and Evolutionary Computation Conference (GECCO-2011)*, 331–338, ACM Digital Library

27. H. Karshenas, R. Santana, C. Bielza, P. Larrañaga (2010). Multi-Objective decomposition with Gaussian Bayesian networks. *Proceedings of the International Conference on Metaheuristics and Nature Inspired Computing (META'10)*, paper 119
28. H. Borchani, C. Bielza, P. Larrañaga (2010). Learning CB-decomposable multi-dimensional Bayesian network classifiers. *Fifth European Workshop on Probabilistic Graphical Models*, 25–32, HIIT Publications 2010-2
29. A. Cuesta-Infante, R. Santana, J.I. Hidalgo, C. Bielza, P. Larrañaga (2010). Bivariate empirical and n-variate Archimedean copulas in estimation of distribution algorithms. *2010 IEEE Congress on Evolutionary Computation (IEEE-CEC-2010)*, 1355–1362, IEEE
30. P. López, C. Bielza, P. Larrañaga, R. Benavides-Piccione, J. DeFelipe (2010). 3D simulation of dendritic morphology using Bayesian networks. *16th Annual Meeting of the Organization for Human Brain Mapping (HBM-2010)*
31. D. Vidaurre, C. Bielza, P. Larrañaga (2009). Variable selection in local regression models via an iterative LASSO. *The Eighth Workshop on Uncertainty Processing (WUPES'09)*, 237–250
32. I. Cuesta, C. Bielza, P. Larrañaga, M. Cuenca-Estrella, J.L. Rodríguez-Tudela (2009). Evaluación de los puntos de corte de fluconazol del CLSI y el EUCAST mediante técnicas de minería de datos. *Revista Enfermedades Infecciosas y Microbiología Clínica*, Vol. 27, 104-105, Elsevier Doyma
33. R. Santana, C. Bielza, J. A. Lozano, P. Larrañaga (2009). Mining probabilistic models learned by EDAs in the optimization of multi-objective problems. *Proceedings of the 11th Annual Conference on Genetic and Evolutionary Computation (GECCO-2009)*, 445–452, ACM Digital Library
34. R. Armañanzas, Y. Saeys, I. Inza, M. García-Torres, Y. van de Peer, C. Bielza, P. Larrañaga (2008). Mass spectrometry data analysis: It's all in the preprocessing. *Proceedings of the BeNeLux Bioinformatics Conference 2008*, 92
35. Correa, M., Alique, J.R., Bielza, C. (2008). Comparativa de modelos con aprendizaje supervisado: Aplicación a un proceso industrial, *IV Simposio de Control Inteligente*
36. Correa, M., Bielza, C., Pamies-Teixeira, J., Alique, J.R. (2008). Redes Bayesianas vs redes neuronales en modelos para la predicción del acabado superficial, *XVII Congreso de Máquinas-Herramienta y Tecnologías de Fabricación*
37. Correa, M., Ramírez, M. de J., Bielza, C., Pamies, J., Alique, J.R. (2007). Predicción de la calidad superficial usando modelos probabilísticos, *VII Congreso de la Asociación Colombiana de Automática*, 1–6
38. Correa, M., Ramírez, M. de J., Bielza, C., Alique, J.R. (2006). Modelos probabilísticos para la predicción de la rugosidad superficial en fresado a alta velocidad, *XVI Congreso de Máquinas-Herramienta y Tecnologías de Fabricación*, Vol 1, 347–365
39. Correa, M., Bielza, C., Ramírez, M. de J., Pamies, J. (2006). Modelado y predicción con redes probabilísticas. Caso de estudio: La rugosidad superficial, *XXVII Jornadas de Automática*, 1356–1361
40. Fernández del Pozo, J.A., Bielza, C. (2006). Gestión de tablas de decisiones óptimas, *XXIX Congreso Nacional S.E.I.O.*, 753–768
41. Barreiro, P., Ruiz-Altisent, M., Bielza, C., Moya-González, A. (2005). Multivariate analysis of an on-line NIR spectrometer under industrial use, *Acta Horticulturae*, 674, 513–519, Ed. International Society for Horticultural Science
42. Fernández del Pozo, J.A., Bielza, C., Gómez, M. (2004). Heurísticas para síntesis de conocimiento multidimensional, *XXVIII Congreso Nacional S.E.I.O.*, 18 pages in CD-ROM
43. Fernández del Pozo, J.A., Bielza, C. (2004). Sensitivity analysis and explanation of optimal decisions, *Second European Workshop on Probabilistic Graphical Models*, 81–88

44. Barreiro, P., Alonso, R., Correa, E.C., Ruiz-Altisent, M., Fabero, J.C., Casaus, 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
45. Puch R.O., Smith, J.Q., Bielza, C. (2002). Inferentially Efficient propagation in non-decomposable Bayesian networks with hierarchical junction trees, *First European Workshop on Probabilistic Graphical Models*, 152–160, Univ. de Castilla-La Mancha
46. 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
47. Barreiro, P., García, F., Ruiz-Altisent, M., Bielza, C. (2001). Desarrollo de un instrumento de ayuda a la decisión para la mejora de las líneas de confección, *Actas de Horticultura 28, IV Congreso Ibérico de Ciencias Hortícolas*, Vol 1, 61–69
48. Fernández del Pozo, J.A., Bielza, C., Gómez, M. (2001). Knowledge synthesis on multidimensional matrices, *Operational Research Peripatetic Postgraduate Programme (ORP³)*, 1–13
49. Fernández del Pozo, J.A., Bielza, C., Gómez, M. (2001). Knowledge synthesis optimising the combinatorial storage of multidimensional matrices, *XIXth EURO Summer Institute –Decision Analysis and Artificial Intelligence–*, 49–57
50. 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
51. Bielza, C., Ríos-Insua, S., Gómez, M., Fernández del Pozo, J.A. (2001). Sensitivity analysis in IctNeo, *Third International Symposium on Sensitivity Analysis of Model Output (SAMO 2001)*, 287–291, Ed. CIEMAT
52. 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
53. Bielza, C., Rodríguez-Galiano, M.I., Barreiro, P. (2001). Minimización de daños a la fruta en líneas de clasificación, *XXVI Congreso Nacional S.E.I.O.*, 12 pages in CD-ROM
54. 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
55. Gómez, M., Bielza, C. (2000). Node deletion sequences in influence diagrams using genetic algorithms, *8th International Conference “Information Processing and Management of Uncertainty in Knowledge-based Systems” -IPMU-*, Vol. III, 1291–1298
56. Ballester, E., Antón, J.M., Bielza, C. (2000). Bayesian approach to road selection with compromise utility functions, *8th International Conference “Information Processing and Management of Uncertainty in Knowledge-based Systems” -IPMU-*, Vol. II, 813–820
57. Gómez, M., Bielza, C. (1999). Algoritmo Genético para secuencias de eliminación de nodos en diagramas de influencia, *VIII Conferencia de la Asociación Española para la Inteligencia Artificial*, Vol I, 116–124
58. Mateos, A., Ríos-Insua, S., Bielza, C., Gómez, M., Sánchez, M., Blanco, D. (1999). A decision analysis approach to extracorporeal life support, *5th International Conference of the Decision Sciences Institute, Integrating Technology and Human Decisions: Global Bridges into the 21st Century*, 665–667, New Technologies Publications
59. Bielza, C., Shenoy, P.P. (1997). A comparison of decision trees, influence diagrams and valuation networks for asymmetric decision problems, *6th International Workshop on Artificial Intelligence and Statistics*, 39–46
60. Bielza, C., Müller, P., Ríos Insua, D. (1997). Markov chain Monte Carlo methods for decision analysis, *6th International Workshop on Artificial Intelligence and Statistics*, 31–38

61. Bielza, C., Clyde, M., Müller, P., Parmigiani, G., Ríos Insua, D. (1996). Optimal design by preposterior simulation on an augmented probability model, *First European Conference on Highly Structured Stochastic Systems*, 109–111

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)

PERSONAL AWARDS

1. Finalist in Ada Byron Award (among 156 applicants) awarded by Deusto University, Bilbao (2020)
2. Machine Learning Award, awarded by Amity University, Noida, India (2020)
3. Recognized as a Member of the European Lab for Learning and Intelligent Systems (ELLIS) (2020)
4. Finalist in Ada Byron Award (among 112 applicants) awarded by Deusto University, Bilbao (2019)
5. 2014 Technical University of Madrid Research Prize
6. Best referee in the *XIII Conference of the Spanish Association for the Artificial Intelligence* (CAEPIA 2009), Sevilla (2009)
7. 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)
8. Best PhD thesis in Engineering in the *Universidad Politécnica de Madrid*, Madrid (1997)
9. 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)

JOINTLY GRANTED 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. BayesFusion Best Student Paper Award 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)* awarded by Fraunhofer IOSB, 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. Best student paper in the *15th Annual Genetic and Evolutionary Computation Conference (GECCO-2013)*, Amsterdam (2013)
9. “Marco Ramoni” best paper award of the *European Society for Artificial Intelligence in MEDicine (AIME)*, Murcia (2013)
10. Second position in the “MEG Mind Reading” competition in *PASCAL2 and the International Conference on Artificial Neural Networks*, Espoo, Finland (2011)
11. Best PhD thesis (under my supervision) awarded by the *Spanish Mathematics Society*, Santiago de Compostela, 2011
12. Best paper of the *International Society of Applied Intelligence in IEA-AIE 2010*, Córdoba (2010)
13. 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)
14. Best paper award of the *Mexican International Conference on Artificial Intelligence*, Guanajuato, México (2009)
15. Best graduate project (under my supervision) awarded by *Cátedra Mercamadrid* from Universidad Politécnica de Madrid, Madrid (2009)
16. Best textbook *Operation Research. Deterministic and Stochastic Models* awarded by *Fundación of Universidad Politécnica de Madrid*, Madrid (2004)
17. Best work to spread the health informatics applications of the *Spanish Society of Health Informatics*, Madrid (2004)
18. Best PhD thesis (under my supervision) awarded by the *Spanish Royal Academy of Doctors*, Madrid (2002)

C. RESEARCH PROJECTS

PUBLIC PROJECTS

1. *Investigación y Desarrollo de Metodología de la Inteligencia Artificial (ML) Orientado a Casos Industriales de Uso de Datos Continuos de Ultra-Alta Velocidad*. Ministry of Science, Innovation and Universities, 2020-2023. Project CoLeader
2. *Bayesian Networks for Data Streams*. Ministry of Science, Innovation and Universities, 2020-2022. Project Leader
3. *HBP - Human Brain Project. SGA3 Phase*. Horizon 2020, FET Flagship Initiative, European Commission, 2020-2023. Task leader
4. *Research Spanish Network “Therapeutic Applications of Systems Neuroscience to Central Nervous System Diseases”*. Ministry of Science, Innovation and Universities, 2019-2021
5. *Research Spanish Network “Artificial Intelligence in Biomedicine”*. Ministry of Science, Innovation and Universities, 2019-2021
6. *IT Basket*. Madrid Autonomous Region, 2019-2020
7. *HBP - Human Brain Project. SGA2 Phase*. Horizon 2020, FET Flagship Initiative, European Commission, 2018-2020. Task leader

8. *Excellence Spanish Network “Big Data and Scalable Data Analysis”*. Ministry of Economy, Industry and Competitiveness, 2017-2019
9. *Clasificadores Bayesianos Multidimensionales para la Interpretación de Emociones en Texto y Vídeo*, National Commission of Scientific and Technological Research (CONICYT), Chile, 2018-2019
10. *Supercomputación para la Inteligencia Artificial*. Ministry of Economy, Industry and Competitiveness, 2018-2020
11. *HBP - Human Brain Project. SGA1 Phase*. Horizon 2020, FET Flagship Initiative, European Commission, 2016-2018. Task leader
12. *Advances in Multidimensional Classification and Anomaly Detection with Bayesian Networks*. Ministry of Economy and Competitiveness, 2017-2019. Project Leader
13. *Excellence Spanish Network “Multimodal Interaction in Pattern Recognition and Computer Vision”*. Ministry of Economy and Competitiveness, 2015-2016
14. *Excellence Spanish Network “Big Data and Scalable Data Analysis”*. Ministry of Economy and Competitiveness, 2015-2017
15. *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
16. *Concepts and Applications of Intelligent Systems*. Madrid Autonomous Region, 2014-2016
17. *HBP - Human Brain Project. Rump Up Phase*. FET Flagship Initiative, European Commission, 2013-2016
18. *Spanish Network for the Advancement and Transference of Computational Intelligence*. Ministry of Economy and Competitiveness, 2012-2012
19. *Spanish Network on Data Mining and Machine Learning*. Ministry of Science and Innovation, 2010-2012
20. *HBP - Human Brain Project*. FET Flagship Initiative Preparatory Actions, European Commission, 2011-2011
21. *Data Mining with Probabilistic Graphical Models: New Algorithms and Applications*. Ministry of Science and Innovation, 2011-2013. Project Leader
22. *Follow-up Congress for Computer Technology Projects*, Ministry of Science and Innovation, 2010-2011. Project Leader
23. *Follow-up Congress for Computer Technology Projects*, Ministry of Science and Innovation, 2009-2010. Project Leader
24. *Intelligent Probabilistic System to Model Scientific Productivity in the Computer Science Area*, Ministry of Science and Innovation, 2009-2011. Project Leader
25. *Cajal Blue Brain Project*. Ministry of Science and Innovation, 2008-2018. Group Leader
26. *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
27. *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
28. *Assessing Quality of Individual Predictions in Medical Decision Support Systems*. National Institutes of Health, USA (1-R01-LM009520-01), 2007-2010
29. *CONSOLIDER: Multimodal Interaction in Pattern Recognition and Computer Vision*, Ministry of Education and Science, 2007-2012

30. *Follow-up Congress for Computer Technology Projects*, Ministry of Education and Science, 2008-2009. Project Leader
31. *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
32. *Concepts and Support Systems to Electronic Democracy*, Madrid Autonomous Region, 2006-2009
33. *Spanish Network on Probabilistic Graphical Models and Applications (Renewal)*, Ministry of Education and Science, 2007-2008
34. *Spanish Network on Multicriteria Decisions (Renewal 2)*, Ministry of Education and Science, 2006-2007
35. *E-Democracy: Internet-Based Support to Complex Decisions*, Ministry of Education and Science, 2005-2007
36. *Spanish Network on Multicriteria Decisions (Renewal 1)*, Ministry of Education and Science, 2005-2006
37. *Research, Development, Validation and Implementation of a Real State Valuation System Based on Artificial Intelligence Techniques*, Ministry of Economy and Treasury, 2005-2006
38. *Spanish Network on Probabilistic Graphical Models and Applications*, Ministry of Education and Science, 2005-2006
39. *Spanish Network on Pattern Recognition and Applications*, Ministry of Science and Technology, 2004-2006
40. *Spanish Network on Multicriteria Decisions*, Ministry of Science and Technology, 2003-2004
41. *Towards Electronic Democracy: Internet-Based Complex Decision Support*, European Science Foundation, 2002-2006
42. *Spanish Network on Research on Health Results and Public Health Services*, Ministry of Health and Consumption, 2003-2006
43. *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
44. *A Multiobjective Decision Support System in Time and with Imprecision*, Ministry of Science and Technology, 2002-2004
45. *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
46. *Contributions to Intelligent Decision Support System Development*, Madrid Autonomous Region, 2001-2002
47. *New Approaches for the Development of the IctNeo System for Neonatal Jaundice Decision Support*, Technical University of Madrid, 1999-2000. Project Leader
48. *Implementing Computerised Methodologies to Evaluate the Effectiveness of Countermeasures for Restoring Radionuclide Contaminated Fresh Water Ecosystems*, European Commission, 1999-2001
49. *Development of a Simulator of Damage Occurrence on a Fruit Grading Line*, Technical University of Madrid, 1999-2000. Project Leader
50. *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
51. *An Intelligent System for Reservoir Management*, Ministry of Education and Science, 1998-2000
52. *Complex Decision Problems*, Madrid Autonomous Region, 1997-1999

53. *A Knowledge-Based System for Neonatal Jaundice Treatment*, Ministry of Health and Consumption, 1997-1998
54. *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
55. *Bayesian Analysis of Stochastic Processes (I y II)*, NATO, 1995-1998
56. *Robust Decision Analysis Implementation*, Ministry of Education and Science, 1995-1998
57. *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 3: Batch Reinforcement Learning*, 2020-2021. Project Leader
2. (Competitive) Grant of Fundación BBVA to Research Groups on the topic of Big Data and Artificial Intelligence with project *Outcome prediction and treatment efficiency in patients hospitalized with COVID-19 in Madrid: A Bayesian network approach*, 2020-2022. Project Leader
3. (Competitive) Grant of Fundación BBVA to Research Groups on the topic of Big Data with project *Score-based nonstationary temporal Bayesian networks. Applications in climate and neuroscience (BAYES-CLIMA-NEURO)*, 2020-2022
4. REPSOL S.A. *Specific Collaboration Agreement Number 2: Artificial intelligence and data science to analyze complex problems*, 2019-2020. Project Leader
5. REPSOL S.A. *Specific Collaboration Agreement Number 1*, 2018-2019. Project Leader
6. OLOCIP 11 S.L. *Probabilistic models for football predictions*, 2018. Project CoLeader
7. 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
8. Etxe-Tar S.A. *Gestión energética avanzada para máquina herramienta de nueva generación (EMON)*, 2017-2017. Project CoLeader
9. 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
10. (Competitive) Grant of Fundación BBVA to Research Groups on the topic of Big Data with project *Multi-view clustering with Bayesian networks*, 2016-2018
11. OLOCIP 11 S.L. *Development of a computer program for prediction and analysis in sports using artificial intelligence*, 2016-2017. Project CoLeader
12. 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

13. 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
14. 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
15. Atos Origin (P10-1015-100). *Dynamic Probabilistic Graphical Models and their Applications*, 2009-2011. Project Leader
16. Produban (Banco Santander). *Minería de Datos y Geomarketing sobre Datos Financiero/Bancarios*, 2009-2010
17. Panda Security. *Adaptación Dinámica del Cambio en Sistemas de Aprendizaje. Problemática Drift*, 2009. Project Leader
18. Fundación Gil Gayarre. *Implantación y Explotación de una Medida de la Calidad de los Servicios en la Fundación Gil Gayarre*, 2005-2006
19. European Computing Consultants. *Modelos Dinámicos Lineales Bayesianos para la Previsión de la Demanda*, 2004. Project Co-leader
20. Telefónica, Publicidad e Información (TPI). *Predicción de Ventas por Anuncios en Páginas Amarillas*, Sept2002-Feb2003. Project Co-leader
21. Fundación Gil Gayarre. *Definición, Construcción, Implantación y Explotación de una Medida de la Calidad de los Servicios en la Fundación Gil Gayarre*, 2001-2002
22. Arthur Andersen. *Modelo de Predicción de Precios del Mercado Eléctrico*, 2001-2003. Project Co-leader
23. Airtel Móvil. *Optimización de Costes a Través de la Calidad y Fidelización: Un Enfoque Estadístico*, 1999
24. Coopers & Lybrand. *Una Metodología de Evaluación de la Calidad*, 1996-1997
25. 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 15 editions since 2006), Coordinator and Instructor

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

1. I. Córdoba (2020). *Unifying Methodologies for Graphical Models with Gaussian Parametrization*
2. P. Fernández-González (2019). *Developments in Probabilistic Graphical Models, Circular Distributions and Theory of Random Forests with Applications in Neuroscience*
3. S. Luengo (2019). *Clustering Based on Bayesian Networks with Gaussian and Angular Predictors. Applications in Neuroscience*
4. J. Díaz-Rozo (2019). *Clustering Probabilístico Dinámico para la Búsqueda de Patrones de Degradación de Elementos de Máquina en el Ámbito del Industrie 4.0*
5. M. Benjumeda (2019). *Learning Tractable Bayesian Networks*
6. B. Mihaljević (2018). *Contributions to Bayesian Network Classifiers and Interneuron Classification*
7. G. Varando (2018). *Theoretical Studies on Bayesian Network Classifiers*
8. I. Leguey (2018). *Directional-linear Bayesian Networks and Applications in Neuroscience*
9. L. Anton-Sanchez (2017). *Statistical and Optimization Methods for Spatial Data Analysis Applied to Neuroscience*
10. A. Ibañez (2015). *Machine Learning in Scientometrics*
11. P.L. López-Cruz (2013). *Contributions to Bayesian Networks Learning with Applications to Neuroscience*
12. H. Karshenas (2013). *Regularized Model Learning in EDAs for Continuous and Multi-Objective Optimization*
13. H. Borchani (2013). *Multi-Dimensional Classification using Bayesian Networks for Stationary and Evolving Streaming Data*
14. L. Guerra (2012). *Semi-supervised Subspace Clustering and Applications to Neuroscience*
15. D. Vidaurre (2012). *Regularization for Sparsity in Statistical Analysis and Machine Learning*
16. M. Correa (2010). *Inteligencia Artificial para Predicción y Control del Acabado Superficial en Procesos de Fresado a Alta Velocidad*
17. J.A. Fernández del Pozo (2006). *Listas KBM2L para la Síntesis de Conocimiento en Sistemas de Ayuda a la Decisión*
18. 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. H. Nugra (2020). *Machine Learning Implementations on NeuroSuites Software*
2. S. Alderisi (2020). *Machine Learning Applied to COVID-19*
3. L.E. Angulo (2020). *Redes Bayesianas en R: Análisis de los Paquetes Disponibles*
4. V. Pérez (2020). *Optimización de un Proceso de un Refinería Usando Algoritmos Evolutivos Basados en Redes Bayesianas Gaussianas*
5. J. Zapatero (2019). *Continuous Data Imputation Applied to Massive Instances*

6. C. Fernández (2019). *Estudio y Aplicación de Métodos Basados en Interacciones para el Aprendizaje Automático sobre Conjuntos de Elementos*
7. J. Ramos (2019). *Aprendizaje Automático para Flujos de Datos*
8. J. Arlandis (2019). *Generative Modeling and Calcium Imaging*
9. F. Parrales (2019). *Estudio de Metodologías de Preprocesamiento y Clasificación Multietiqueta para Datos Clínicos de Pacientes con Migraña*
10. S. Paniego (2019). *Visualization and Interpretation in Large Bayesian Networks*
11. N. Bernaola (2019). *Learning Interpretable Gene Regulatory Networks via Merging Bayesian Networks*
12. A. Rodríguez-González (2018). *Aprendizaje Automático Aplicado al Scouting Futbolístico*
13. A. Alcón (2018). *Modelos de Aprendizaje Automático sobre el Juego del Club Movistar Estudiantes*
14. D. Valero (2018). *Nuevo Algoritmo de Clasificación Multietiqueta con Redes Bayesianas. Aplicación a un Problema Industrial*
15. S. Gil-Begué (2018). *Nuevos CLasificadores Bayesianos Multi-Dimensionales. Aplicaciones a la Eficiencia Energética en la Industria 4.0*
16. C. Villa (2018). *Estudio de la Deriva Térmica sobre una Máquina de Medición de Alta Precisión mediante Análisis de Regresión Multi-Respuesta*
17. C.E. Puerto-Santana (2018). *Asymmetric Linear Gaussian Hidden Markov Models with an Application to Determine Bearings Health State*
18. M. Llera (2017). *A Novel Multi-dimensional Regression Model based on Gaussian Networks*
19. S. Vakaruk (2017). *Redes Bayesianas Clasificadoras Multidimensionales en Tiempo Continuo*
20. F.J. Mesonero (2017). *Arquitectura para Detección de Anomalías en un Proceso de Templado Laser*
21. A. Ogbechie (2017). *Using Dynamic Bayesian Networks for the Automated Visual Inspection and Analysis of an Industrial Laser Process*
22. D. Atienza (2016). *Detección de Anomalías durante un Proceso de Templado Láser con un Seguimiento Espacio-Temporal*
23. F. Rodríguez Sánchez (2016). *Multi-view Clustering with Bayesian Networks*
24. I. Córdoba-Sánchez (2015). *Fusión de Redes Bayesianas Gaussianas*
25. L. Antón-Sánchez (2015). *Computación Evolutiva de Bosques de Expansión Mínimos con Restricciones de Grado y de Rol*
26. L. Rodríguez-Luján (2015). *Caracterización y Simulación de Arborizaciones Dendríticas con Redes Bayesianas Incluyendo Variables Angulares*
27. Patricia Maraver (2015). *Clasificación Supervisada de las Neuronas de la Base de Datos NeuroMorpho*
28. M. Benjumbeda (2014). *Learning Bayesian Networks from Data by the Incremental Compilation of New Network Polynomials*
29. S. Luengo (2014). *Clustering Basado en Redes Bayesianas con Predictoras Continuas. Aplicaciones en Neurociencia*
30. P. Fernández-González (2014). *Contributions to the truncated von Mises distribution for the univariate and bivariate case*
31. P. López-Adeva (2013). *Markov models for the multivariate von Mises distribution*

32. B. Mihaljević (2013). BAYESCLASS. *An R package for learning Bayesian network classifiers. Applications to neuroscience*
33. J. Pérez (2012). *Replicated spatial point processes for statistical neuroscience*
34. P. López-Cruz (2010). *Simulación de morfologías dendríticas mediante redes Bayesianas*
35. A. Ibáñez (2009). *Técnicas de aprendizaje automático aplicadas a la bibliometría*
36. 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 Irurozqui, Universidad del País Vasco (2014)
- Angela Fernández Pascual, Universidad Autónoma de Madrid (2014)
- Nicolaj Søndberg-Jepesen, 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), Royal Academy of Engineering (2015), AEPIA Summer School (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. Aging
2. Annals of Operations Research
3. Artificial Intelligence in Medicine
4. Artificial Intelligence Review
5. Bioinformatics
6. BMC Bioinformatics
7. Computational Intelligence
8. Computational Statistics and Data Analysis
9. Computers in Biology and Medicine
10. Computer Methods and Programs in Biomedicine
11. Decision Analysis
12. Decision Support Systems
13. Entropy

14. European Journal of Operational Research
15. Evolutionary Computation
16. Frontiers in Neuroanatomy
17. Frontiers in Psychology
18. IEEE Access
19. IEEE Transactions on Evolutionary Computation
20. IEEE Transactions on Industrial Informatics
21. IEEE Transactions on Knowledge and Data Engineering
22. IEEE Transactions on Pattern Analysis and Machine Intelligence
23. Information Sciences
24. International Journal of Aerospace Engineering
25. International Journal of Approximate Reasoning
26. International Journal of Intelligent Systems
27. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems
28. Journal of Applied Statistics
29. Journal of Biomedical Informatics
30. Journal of Computational and Graphical Statistics
31. Journal of Computer Science and Technology
32. Journal of Neuroscience Methods
33. Journal of the Neurological Sciences
34. Machine Learning
35. Management Science
36. Medical Decision Making
37. Neurocomputing
38. Neuroinformatics
39. Pattern Recognition
40. PLOS Computational Biology
41. QÜESTIÓ (Quaderns d'Estadística i Investigació Operativa)
42. Statistics in Medicine
43. Shock and Vibration
44. The Scientific World Journal
45. TOP

BOOK PROPOSAL REVIEWER:

1. *Chapman & Hall/CRC Press*, 2013 and 2018
2. *Cambridge University Press*, 2020

PLENARY TALKS IN CONFERENCES

1. 10th International Conference on Cloud Computing, Data Science and Engineering (CONFLUENCE-2020), Noida (India) (2020)
2. Global Innovation Day (Past, Present and Future of Artificial Intelligence), XIX Science Week, Euskalduna Palace, Bilbao (2019)
3. Women in Data Science (WiDS-2017), Madrid (2017)
4. 8th European Conference on Data Mining 2014 (ECDM-2014) / 8th International Conference on Intelligent Systems and Agents 2014 (ISA-2014), Lisbon (2014)
5. 26th IEEE International Symposium on Computer-Based Medical Systems (CBMS), Porto (2013)
6. Sixth European Workshop on Probabilistic Graphical Models (PGM), Granada (2012)

ORGANIZER OF CONFERENCES AND SCIENTIFIC EVENTS

1. Panel *Current Trends and Controversies* within 8th IEEE International Conference on Data Science and Advanced Analytics (IEEE-DSAA-2021), Porto, 2021
2. *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
3. *Jornadas Científico-Técnicas y Seminario Doctoral de la Red ATICA (SEMÁTICA-2013)*, Madrid, 2013
4. Program Chair of the *XV Conference of the Spanish Association for the Artificial Intelligence (CAEPIA '13)*, Madrid, 2013
5. Session *Optimization and Data Mining* within XXV European Conference on Operational Research (EURO XXV - 2012), Vilnius, 2012
6. *IX Jornada de Seguimiento de Proyectos en Tecnologías Informáticas*, Madrid, 2010
7. Session *Optimization and Data Mining* within XXIV European Conference on Operational Research (EURO XXIV - 2010), Lisbon, 2010
8. *VIII Jornada de Seguimiento de Proyectos en Tecnologías Informáticas*, Madrid, 2009
9. *VII Jornada de Seguimiento de Proyectos en Tecnologías Informáticas*, Zaragoza, 2007
10. *Doctorado Interuniversitario "Modelos Probabilísticos para la Inteligencia Artificial y la Minería de Datos"*, San Lorenzo de El Escorial (Madrid), 2006
11. *Primera Reunión de la Red Temática sobre Modelos Gráficos Probabilísticos y Aplicaciones*, San Lorenzo de El Escorial (Madrid), 2006
12. *Workshop on Graphical Modelling of Dependent Uncertainties for Decision Support in Public Policy*, Gartmore (UK), 2004
13. 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. 16th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2021), Prague, 2021
2. 30th International Joint Conference on Artificial Intelligence (IJCAI-2021): Senior Program Committee Member, Montreal (Canada), 2021

3. 29th International Joint Conference on Artificial Intelligence and 17th Pacific Rim International Conference on Artificial Intelligence (IJCAI-PRICAI-2020), Yokohama (Japan), 2021
4. 23rd International Conference on Discovery Science (DS-2020), Thessaloniki (Greece), 2020
5. 10th International Conference on Probabilistic Graphical Models (PGM'20), Aalborg (Denmark), 2020
6. 24th European Conference on Artificial Intelligence (ECAI-2020), Santiago de Compostela, 2020
7. 22nd International Conference on Discovery Science (DS-2019), Split (Croatia), 2019
8. 15th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2019), Belgrade, 2019
9. X Congreso Internacional de Computación e Informática del Norte de Chile (INFONOR-2019), Antofagasta (Chile), 2019
10. XVIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-2018), Granada, 2018
11. II Workshop en Big Data y Análisis de Datos Escalable (II BigDADE), Granada, 2018
12. 9th International Conference on Probabilistic Graphical Models (PGM'18), Prague, 2018
13. IX Congreso Internacional de Computación e Informática del Norte de Chile (INFONOR-2018), Iquique (Chile), 2018
14. International Workshop on Automatic Machine Learning (AutoML-2018) within the International Conference in Machine Learning, Stockholm (2018)
15. 4th IEEE International Conference on Data Science and Advanced Analytics (IEEE-DSAA-2017), Tokyo, 2017
16. 14th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2017), Lugano, 2017
17. 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
18. 15th Ibero-American Conference on Artificial Intelligence (IBERAMIA 2016), San José (Costa Rica), 2016
19. Workshop on Data Science for Social Good (SoGood 2016), within ECML-PKDD 2016, Riva del Garda (Italy), 2016
20. XVII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-2016), Salamanca, 2016
21. International Conference on Probabilistic Graphical Models (PGM'16), Lugano, 2016
22. 22nd European Conference on Artificial Intelligence (ECAI-2016), The Hague, 2016
23. 25th International Joint Conference on Artificial Intelligence (IJCAI-16), New York, 2016
24. I Workshop “BigData y Análisis de Datos Escalable” (BigDADE-2015), Albacete, 2015
25. XVI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-2015), Albacete, 2015
26. Workshop on Adaptive Treatments and Therapies (WATT-2015), Istanbul, 2015
27. 2015 Genetic and Evolutionary Computation Conference (GECCO-2015), Madrid, 2015

28. 3rd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO-2015), Granada, 2015
29. Seventh European Workshop on Probabilistic Graphical Models (PGM'14), Utrecht, 2014
30. 21st European Conference on Artificial Intelligence (ECAI-2014), Prague, 2014
31. 2014 Genetic and Evolutionary Computation Conference (GECCO-2014), Vancouver, 2014
32. 15th Biennial European Conference of the Society for Medical Decision Making (ESMDM-2014), Antwerp, 2014
33. 2nd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO-2014), Granada, 2014
34. 23rd International Joint Conference on Artificial Intelligence (IJCAI-13), Beijing, 2013
35. 12th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-2013), Utrecht, 2013
36. 2013 Genetic and Evolutionary Computation Conference (GECCO-2013), Amsterdam, 2013
37. IEEE Congress on Evolutionary Computation (IEEE CEC-2013), Cancún, 2013
38. International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO-2013), Granada, 2013
39. Sixth European Workshop on Probabilistic Graphical Models (PGM'12), Granada, 2012
40. 7th Conference on Prestigious Applications of Intelligent Systems (PAIS-2012), within ECAI-2012, Montpellier, 2012
41. 9th Bayesian Modelling Applications Workshop (within UAI-2012), Catalina Island, 2012
42. 28th Conference on Uncertainty in Artificial Intelligence (UAI-2012), Catalina Island, 2012
43. 2012 Genetic and Evolutionary Computation Conference (GECCO-2012), Philadelphia, 2012
44. IEEE Congress on Evolutionary Computation (IEEE CEC-2012), Brisbane, 2012
45. 4th Biennial European Conference of the Society for Medical Decision Making (ESMDM-2012), Oslo, 2012
46. International Conference on Pattern Recognition Applications and Methods (ICPRAM-2012), Algarve, 2012
47. XIV Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'11), Tenerife, 2011
48. 22th International Joint Conference on Artificial Intelligence (IJCAI-11), Barcelona, 2011
49. 27th Conference on Uncertainty in Artificial Intelligence (UAI-2011), Barcelona, 2011
50. 2011 Genetic and Evolutionary Computation Conference (GECCO-2011), Dublin, 2011
51. Probabilistic Problem Solving in Biomedicine (ProBioMed'11), within 13th Conference on Artificial Intelligence in Medicine (AIME-2011), Bled, 2011
52. 13th International Conference on Discovery Science (DS-2010), Canberra, 2010
53. Fifth European Workshop on Probabilistic Graphical Models (PGM'10), Helsinki, 2010
54. 26th Conference on Uncertainty in Artificial Intelligence (UAI-2010), Catalina Island, 2010
55. 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

56. 13th European Meeting of the Society for Medical Decision Making (ESMDM-2010), Tyrol, 2010
57. XIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-TTIA 2009), Sevilla, 2009
58. 12th International Conference on Discovery Science (DS-2009), Porto, 2009
59. European Conference on Machine Learning – Conference on Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2009), Bled, 2009
60. 21th International Joint Conference on Artificial Intelligence (IJCAI-09), Pasadena, 2009
61. 25th Conference on Uncertainty in Artificial Intelligence (UAI-2009), Montreal, 2009
62. 11th Ibero-American Conference on Artificial Intelligence (IBERAMIA 2008), Lisbon, 2008
63. Fourth European Workshop on Probabilistic Graphical Models (PGM'08), Hirtshals, 2008
64. IV International Symposium on Applications of Modelling as an Innovative Technology in the Agri-Food Chain (Model-IT 2008), Madrid, 2008
65. IFAC Conference on Cost Effective Automation in Networked Product Development and Manufacturing (IFAC-CEA-2007), Monterrey, 2007
66. 18th European Conference on Machine Learning (ECML) – 11th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD), Varsovia, 2007
67. 23th Conference on Uncertainty in Artificial Intelligence (UAI-2007), Vancouver, 2007
68. IADIS International Conference Intelligent Systems and Agents (ISA-2007), Lisbon, 2007
69. Third European Workshop on Probabilistic Graphical Models (PGM'06), Prague, 2006
70. 16th European Conference on Machine Learning (ECML) – 9th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD), Porto, 2005
71. Second European Workshop on Probabilistic Graphical Models (PGM'04), Leiden, 2004
72. 20th Conference on Uncertainty in Artificial Intelligence (UAI-2004), Banff, 2004
73. 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
74. 19th Conference on Uncertainty in Artificial Intelligence (UAI-2003), Acapulco, 2003
75. First European Workshop on Probabilistic Graphical Models (PGM'02), Cuenca, 2002
76. 17th Conference on Uncertainty in Artificial Intelligence (UAI-2001), Seattle, 2001
77. International Symposium on Adaptive Systems. Evolutionary Computation and Probabilistic Graphical Models (ISAS2001), La Habana, 2001
78. 16th Conference on Uncertainty in Artificial Intelligence (UAI-2000), Stanford, 2000

SESSION CHAIR OF CONFERENCES

1. Learning in *International Conference on Probabilistic Graphical Models (PGM'20)*, Aalborg (virtual), 2020
2. Machine Learning: Multi-Instance/Multi-Label/Multi-View Learning in *24th European Conference on Artificial Intelligence (ECAI-2020)*, Santiago de Compostela, 2020
3. Inference in *International Conference on Probabilistic Graphical Models (PGM'18)*, Prague, 2018

4. Dynamic Models in *International Conference on Probabilistic Graphical Models (PGM'16)*, Lugano, 2016
5. Learning in *22nd European Conference on Artificial Intelligence (ECAI-2016)*, The Hague, 2016
6. Probabilistic Graphical Models in *XVI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'15)*, Albacete, 2015
7. Classification and Clustering in *Sixth European Workshop on Probabilistic Graphical Models (PGM'12)*, Granada, 2012
8. Optimization and Data Mining in *EURO XXV*, Vilnius, 2012
9. Machine Learning in *XIV Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'11)*, Tenerife, 2011
10. Influence Diagrams in *Fifth European Workshop on Probabilistic Graphical Models (PGM'10)*, Helsinki, 2010
11. Optimization and Data Mining in *EURO XXIV*, Lisbon, 2010
12. Redes Bayesianas in *XIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA-TTIA 2009)*, Sevilla, 2009
13. Statistical Data Analysis in *6th International Symposium on Intelligent Data Analysis (IDA'05)*, Madrid, 2005
14. Influence Diagrams and Decision Networks in *Second European Workshop on Probabilistic Graphical Models (PGM'04)*, Leiden, 2004
15. Influence Diagrams in *First European Workshop on Probabilistic Graphical Models (PGM'02)*, Cuenca, 2002
16. Computational Methods in Bayesian Statistics in *EURO XV-INFORMS XXXIV*, Barcelona, 1997
17. 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”, organized by NSF, NIH and MINECO, 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. 19th Mexican International Conference on Artificial Intelligence, Mexico City, Mexico, 2020 (virtual)
2. 14th Conference on Artificial Intelligence in Medicine, Murcia, 2013
3. XIV Conference of the Spanish Association for Artificial Intelligence, Tenerife, 2011
4. 12th International Conference on Discovery Science, Porto, 2009

MEMBER OF COMMITTEES EVALUATING SCIENTIFIC PROJECTS

1. *Project Proposals for the European Research Council: ERC-Consolidator Grants*, ERC (2020)

2. *Member of the Committee of Experts of the Test of Time Award 2020 at ECML/PKDD-2010*, (2020)
3. *Member of the Scientific Advisory Board of the Norwegian University of Science and Technology, Trondheim, Norway* (2020)
4. *Project Proposals for The Education University of Hong Kong, Hong Kong* (2018)
5. *Project Proposal within the International PostDoc Initiative (IPODI) Fellowship Program*, Technische Universität Berlin (2017)
6. *Evaluating Committee of 2016 R+D Projects of Young Researchers*, Spanish Ministry of Economy and Competitiveness, Madrid (2016)
7. *Committee for the Evaluation of Fundamental Research Projects of the National Plan in the Computer Technology (TIN) area*, Spanish Ministry of Economy and Competitiveness, Madrid (2015, 2016)
8. *Project Proposals for Czech Science Foundation, Czech Republic* (2015)
9. *Follow-up Committee of Fundamental Research Projects of the National Plan in the Computer Technology (TIN) area*, Spanish Ministry of Economy and Competitiveness, Madrid (2014)
10. *Project Proposals for Junta de Andalucía, Córdoba* (2013)
11. *Project Proposals for Agence Nationale de la Recherche, France* (2012)
12. *Evaluating Committee to Certify R+D Industrial Projects*, Agencia de Acreditación de Proyectos de Investigación, Desarrollo e Innovación Tecnológica (AIDIT), Madrid (2012)
13. *Follow-up Commission for Computer Technology Projects*, Spanish Ministry of Science and Innovation, Madrid (2011)
14. *Evaluating Committee of Computer Technology Projects*, Spanish Ministry of Science and Innovation, Madrid (2009, 2009, 2011)
15. *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))

MEMBER OF COMMITTEES EVALUATING GRANTS AND RESEARCH CAREERS

1. *Evaluating Committee of Researchers*, Portuguese Public Funding Agency for R&D (FCT), Portugal (2019, 2020)
2. *Professor Position (4 applicants)*, Aalborg University, Denmark (2020)
3. *External Preselection Committee of 2019 Program of Postgraduate Scholarships for Studies in Europe, and in North America and the Asia-Pacific region*, Obra Social “la Caixa”, Barcelona (2019)
4. *Associate Professor Position (2 applicants)*, Linköping University (2018)
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. *Associate Professor Position*, Aalborg University, Denmark (2010)

SCIENCE DISSEMINATION

- *Datos Inteligentes, Descarga la Tormenta Perfecta*, El Mundo - El Cultural, pp. 58-62, 18-12-20
- *Interview about COVID-19 Project Funded by FBBVA*, Radio RNE-News-Madrid, 4-11-20

- *La Matemática que Trata de Acabar con el Caos de Datos de la Covid en España y Salvar Vidas*, El Español, 18-10-20
- *Lessons from Sport to Compete with Artificial Intelligence*, IESE Business School Insight 156, pp. 68–74 (2020)
- *Inteligencia Artificial por Todos Lados*, El Correo Español-El Pueblo Vasco (2019)
- *Quality Control Process to Detect the Anomalies during Laser Surface Heat Treatment*, LIA TODAY Newsletter, 27, 1, p. 10 (2019)
- *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–YoDonna p. 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

ENTREPRENEURSHIP

- Technological Partner of company Olocip 11 S.L. (10 % stake) since March 2018

MANAGING

- Academic Secretary of the Artificial Intelligence Department (Technical University of Madrid), May 2007 - December 2008
- Member of Curriculum Itinerary Commission of Computer Science Degree (Technical University of Madrid), June 2009 - February 2017
- Member of the Academic Planning Commission of Computer Science Degree (Technical University of Madrid), 2006-2008