

## Curriculum Vitae

July 26, 2019

**Delicado Useros, Pedro Francisco**

**Orcid code:** 0000-0003-3933-4852

**ResearcherID:** K-5905-2017

Departament d'Estadística i Investigació Operativa  
Universitat Politècnica de Catalunya  
Campus Nord, Edifici C5, Despatx 218  
C/ Jordi Girona 1-3  
08034 Barcelona, Spain  
Phone: (34) 93 401 5698  
e-mail: [pedro.delicado@upc.es](mailto:pedro.delicado@upc.es)  
Web page: <http://www-eio.upc.es/~delicado/>

**Birth:** October 4, 1967; Albacete, Spain.

**Neighborhood of home address:** Poblenou, 08005 Barcelona.

### Education:

- Degree in Mathematics (1990), Universidad Complutense de Madrid.  
Ph.D. in Economics (1995), Department of Statistics, Universidad Carlos III de Madrid.  
*Thesis title:* “Contrastes de bondad de ajuste en el modelo de regresión con coeficientes aleatorios”  
(Advisor: J. Romo).

### Previous positions:

- 2000-present: Associate Professor (TU, permanent position), Universitat Politècnica de Catalunya.
- 1995-2000: Assistant Professor (Tenure-track position), Universitat Pompeu Fabra.
- 1990-1995: Teaching Assistant (AU, Becario FPI, AEU), Universidad Carlos III de Madrid.

### Administrative tasks:

- Vice dean at the Facultat de Matemàtiques i Estadística, UPC (March 2015 - November 2017) and Director of the Master Program in Statistics and Operations Research UPC-UB (March 2015 - November 2017).
- Vice dean for the undergraduate program in Statistics (Cap d'Estudis d'Estadística) at the Facultat de Matemàtiques i Estadística, UPC, March 2009 - March 2012.
- Acting Director of the Interuniversity Master Program in Statistics and Operations Research UPC-UB, September 2008 - August 2009.
- Head of Department Section, from September 2002 to August 2003.

### Positive evaluations, accreditations, awards:

- Acreditación de Catedrático de Universidad, ANECA (01-12-2010).
- Acreditació de Recerca Avançada, AQU (01-03-2010).
- Four positive evaluations of the research activity, *Sexenios*, corresponding to years 1991-1999, 2000-2005, 2006-2011 and 2012-2017, by the CNEAI (area of **Mathematics**).
- Five positive evaluations of the teaching activity, *Quinquenios*.
- One positive evaluation of University administrative tasks, *Sexenio de Gestión* (2018).
- Premio Extraordinario de Doctorado, Universidad Carlos III de Madrid.

## Research activity

**Main research interests:** Statistics and Data Science interrelation, Big Data, functional data analysis, nonparametric statistics, distance based statistical methods, multivariate data analysis, dimensionality reduction, spatial statistics, data visualization, applications of Statistics to real problems.

**Research projects financed by public funds:** (last 10 years)

7. *MTM2017-88142-P ESTRECHANDO LA BRECHA ENTRE LA ESTADISTICA Y LA CIENCIA DE DATOS.*  
Ministerio de Economía, Industria y Competitividad. (01.01.2018 - 31.12.2020).  
Grant amount (euros): 4,600.00. Number of participants: 1.  
Lead resercher: Pedro Delicado.
6. *MTM2013-43992-R MUESTRAS DE MUESTRAS: APLICACIONES RELEVANTES DE LA ESTADISTICA EN LA ECONOMIA Y LA SOCIEDAD DIGITAL.*  
Ministerio de Economía y Competitividad. (01.01.2014 - 30.06.2018).  
Grant amount (euros): 39,000.00. Number of participants: 6.  
Lead reserchers: Pedro Delicado and Josep Ginebra.
5. *MTM2010-14887 ESTADISTICA Y PROBABILIDAD ORIENTADA AL ANALISIS DE DATOS DISCRETO.*  
Ministerio de Ciencia e Innovación. (01.01.2011 - 31.12.2013).  
Grant amount (euros): 32,400.00. Number of participants: 6.  
Lead resercher: Pedro Delicado.
4. *MTM2009- 13985-C02-01 Análisis de datos complejos.*  
Ministerio de Ciencia e Innovación. (01.01.2010 - 31.12.2010).  
Grant amount (euros): 34,300.00 Number of participants: 18.  
Lead resercher: Pedro Delicado.
3. *MTM2006-09920 Análisis de datos complejos: métodos paramétricos, no paramétricos y basados en distancias.*  
Ministerio de Educación y Ciencia. (01.10.2006 - 30.09.2009).  
Grant amount (euros): 107,992.50 Number of participants: 12.  
Lead resercher: Pedro Delicado.
2. *MTM2005-02370 Análisis Multivariante No Lineal: técnicas no paramétricas y basadas en distancias.*  
Ministerio de Educación y Ciencia y FEDER. (15.10.2005 - 14.10.2006).  
Grant amount (euros): 7,140.00 Number of participants: 7.  
Lead resercher: Pedro Delicado.
1. *BFM-2001-2327 Medidas de información estadística y diseño de experimentos.*  
Ministerio de Educación y Ciencia. (28.12.2001 - 28.12.2004).  
Grant amount (euros): 42,210.00 Number of participants: 7.  
Lead resercher: Josep Ginebra.

**Stays in foreign research institutions:** (continued stays exceeding one month).

3. Sabbatical stay of 6 months at the Department of Statistics, University of California at Davis, California, USA (March-August 2013). Contact person at Davis: Professor Hans-George Müller. Funds for the stay: 2012 call of the **Estancias de profesores e investigadores seniores en centros extranjeros, incluido el programa “Salvador de Madariaga”**.
2. Visiting Professor at the Institut de Mathématiques de Toulouse for 1 month, Université Paul Sabatier, Toulouse, France (April 2012). Contact person at Toulouse: Professor Philippe Vieu. Funds for the stay: Contract as a Visiting Professor, Université Paul Sabatier.
1. Postdoctoral stay at the Department of Statistics for 6 months, University of California at Berkeley, California, USA (April-September 1995). Contact Person: Rudy Beran.

### Conference and Seminar organization:

8. 7th Iberian Mathematical Meeting (7IMM) to be held in Évora, Portugal from 12th to 14th October 2018. Co-organizer of the Mathematics of Big Data scientific area.
7. Fourth International Workshop on Functional and Operatorial Statistics, IWFOs 2017, A Coruña, Spain, from 15th to 17th June 2017. Member of the Scientific Committee.
6. XIII Conferencia Española y III Encuentro Iberoamericano de Biometría, Barcelona, 7-9 September 2011. Member of the Scientific Committee.
5. Session organizer on "Nonlinear Dimensionality Reduction" at 3rd International Conference of the ERCIM Working Group on Computing and Statistics, London, UK, 10-12 December 2010.
4. Session organizer on "Discrete Probability Distributions" at International Workshop on Applied Probability IWAP-2010, Madrid, 5-8 July 2010.
3. ALT'06 (The 17th International Conference on Algorithmic Learning Theory) and DS'06 (The 9th International Conference on Discovery Science), Barcelona, 7-10 October 2006. Member of the organizing committee.
2. Statistics and Operations Research Seminar, Dpt. Estadística i Investigació Operativa, UPC (Co-organizer, 2004-2008).
1. Statistics Seminar, Dpt. Economia i Empresa, UPF (1998-1999).

### Ph.D. students:

5. Nihan Acar-Denizli, Institute of Science and Technology, Minar Sinam Fine Arts University, Istanbul, Turkey, November 2016. Thesis title: *A Functional Data Analysis Approach To Remote Sensing Data*. Co-supervised with Gülay Basarir, Minar Sinam Fine Arts University, Istanbul, Turkey.
4. Marcelo Smrekar, Universitat Politècnica de Catalunya, January 2011. Thesis title: *Dependencia no lineal entre variables aleatorias: evaluación y aplicaciones*.
3. Sonia Broner, Universitat Politècnica de Catalunya, January 2010. Thesis title: *Análisis Espacial de Datos Electorales. Aplicación al Municipio de Barcelona*.
2. Ramón Giraldo Henao, Universitat Politècnica de Catalunya, July 2009. Thesis title: *Geostatistical Analysis of Functional Data*. Co-supervised with Jorge Mateu, Universitat Jaume I de Castelló.
1. Juan Ramón González Ruiz, Universitat Politècnica de Catalunya, July 2006. Thesis title: *Inference for a general class of models for recurrent events with application to cancer data*. Co-supervised with Edsel Peña, University of South Carolina, Columbia, USA.

### Publications

#### Papers in refereed journals with impact factor (included at the Web of Science)

36. Acar-Denizli, N., Delicado, P., Basarir, G. and Caballero, I. (2018) Functional regression on remote sensing data in oceanography. *Environmental and Ecological Statistics*, 25, 277-304. DOI: 10.1007/s10651-018-0405-7
35. Delicado, P. and P. Vieu (2017), Choosing the most relevant level sets for depicting a sample of densities. *Computational Statistics*, 32 (3) 1083-1113. DOI: 10.1007/s00180-017-0746-y
34. Chen, K., Delicado, P. and Müller, H.-G. (2017), Modelling function-valued stochastic processes, with applications to fertility dynamics. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 79 (1), 177-196. DOI: 10.1111/rssb.12160.
33. Boj, E., P. Delicado, J. Fortiana, A. Esteve and A. Caballé (2016) Local Distance-Based Generalized Linear Models using the `dbstats` Package for R. *TEST*, 25 (1) 170-195. DOI 10.1007/s11749-015-0447-1

32. Delicado, P. and P. Vieu (2015) Optimal level sets for bivariate density representation. *Journal of Multivariate Analysis*, 140, 1-18. DOI:10.1016/j.jmva.2015.04.005
31. Delicado, P., Hernández, A. and Lugosi, G. (2014) Data-based decision rules about the convexity of the support of a distribution. *Electronic Journal of Statistics*, 8, 96-129. DOI: 10.1214/14-EJS877
30. Amela, I., Delicado, P., Gomez, A., Querol, E. and Cedano, J. (2013) A Dynamic Model of the Proteins that Form the Initial Iron-Sulfur Cluster Biogenesis Machinery in Yeast Mitochondria. *The Protein Journal*, 32 (3), 183-196. DOI: 10.1007/s10930-013-9475-4
29. Giraldo, R., Delicado, P. and Mateu, J. (2012) geofd: An R package for function-valued geostatistical prediction. *Revista Colombiana de Estadística*. 35 (3), 385-407.
28. Giraldo, R., Delicado, P. and Mateu, J. (2012) Hierarchical clustering of spatially correlated functional data. *Statistica Neerlandica*, 66 (4), 403–421. DOI: 10.1111/j.1467-9574.2012.00522.x
27. Comas, C., Mateu, J. and Delicado, P. (2011) On tree intensity estimation for forest inventories: some statistical issues. *Biometrical Journal*, 53, 994–1010. DOI: 10.1002/bimj.201000193.
26. Comas, C., Delicado, P. and Mateu, J. (2011) A second order approach to analyse spatial point patterns with functional marks. *TEST*. 20, 503–523. DOI: 10.1007/s11749-010-0215-1
25. Delicado, P. (2011) Dimensionality reduction when data are density functions. *Computational Statistics and Data Analysis*, 55 (1), 401–420. DOI: 10.1016/j.csda.2010.05.008
24. Giraldo, R., Delicado, P. and Mateu, J. (2011) Ordinary kriging for function-valued spatial data. *Environmental and Ecological Statistics*, 18, 411–426. DOI: 10.1007/s10651-010-0143-y
23. Amela, I., Delicado, P., Gomez, A., Bonas, S., Querol, E. and Cedano, J. (2010) DockAnalyse: an application for the analysis of protein-protein interactions. *BMC Structural Biology*, 10:37. DOI: 10.1186/1472-6807-10-37.
22. Delicado, P., Giraldo, R., Comas, C. and Mateu, J. (2010) Statistics for spatial functional data. *Environmetrics*. Volume 21, Issue 3-4, pages 224–239. DOI: 10.1002/env.1003
21. Giraldo, R., Delicado, P. and Mateu, J. (2010) Continuous Time-Varying Kriging for Spatial Prediction of Functional Data: An Environmental Application. *Journal of Agricultural, Biological, and Environmental Statistics (JABES)*. 15 (1), 66–82. DOI: 10.1007/s13253-009-0012-z
20. Boj, E., Delicado, P. and Fortiana, J. (2010) Distance-based local linear regression for functional predictors. *Computational Statistics and Data Analysis*, 54 (2) 429–437. DOI:10.1016/j.csda.2009.09.010.
19. González, J. R., Peña, E. and Delicado, P. (2010) Confidence intervals for median survival time with recurrent event data. *Computational Statistics and Data Analysis*, 54 (1) 78–89. DOI: 10.1016/j.csda.2009.07.012
18. Almansa, J. and Delicado, P (2009) Analysing musical performance through functional data analysis: rhythmic structure in Schumann’s Träumerei. *Connection Science*, 21 (Issues 2 & 3), 207–225.
17. Delicado, P. and Smrekar, M. (2009) Measuring non-linear dependence for two random variables distributed along a curve. *Statistics and Computing*, 19 (3), 255-269. DOI: 10.1007/s11222-008-9090-y
16. Delicado, P. and Goría, M. (2008) A small sample comparison of maximum likelihood, moments and L-moments methods for the asymmetric exponential power distribution. *Computational Statistics and Data Analysis*, 52 (3) 1661–1673. DOI: 10.1016/j.csda.2007.05.021.
15. Cedano, J., Huerta, M., Estrada, I., Ballllosera, F., Conchillo, O., Delicado, P. and Querol, E. (2007) A web server for automatic analysis and extraction of relevant biological knowledge. *Computers in Biology and Medicine*, 37 (11) 1672–1675
14. Delicado, P. (2007) Functional k -sample problem when data are density functions. *Computational Statistics*, 22 (3) 391–410.

13. Delicado, P. (2006) Local likelihood density estimation based on smooth truncation. *Biometrika*, 93 (2) 472–480.
12. Udina, F. and Delicado, P. (2005) Estimating parliamentary composition through electoral polls. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 168, 387–399.
11. Delicado, P. and Romo, J. (2004) Random coefficient regressions: Parametric goodness-of-fit. *Journal of Statistical Planning and Inference*, 119 (2), 377–400.
10. Delicado, P. and del Río, M. (2003) A Generalization of Histogram Type Estimators. *Journal of Nonparametric Statistics*, 15 (1), 113–135.
9. Delicado, P. and Huerta, M. (2003) Principal Curves of Oriented Points: Theoretical and computational improvements. *Computational Statistics*, 18 (2) 293–315.
8. Castro, F., Delicado, P. and da Rocha, J.M. (2002) Desperately seeking theta's: Estimating the distribution of consumers under increasing block rates. *Journal of Regulatory Economics*, 22 (1), pp. 29–58.
7. Delicado, P. and Placencia, I. (2001) Comparing empirical distributions of p-values from simulations. *Communications in Statistics. Simulation and Computation*, 30 (2), pp. 403–422.
6. Delicado, P.(2001) Another look at principal curves and surfaces. *Journal of Multivariate Analysis*, 77, 84–116.
5. Arana, E., Delicado, P. and Martí-Bonmatí, L. (1999) Validation Procedures in Radiological Diagnostic Models. Neural Network and Logistic Regression. *Investigative Radiology*, 34, 636–642.
4. Delicado, P. and Romo, J. (1999) Goodness of fit test in random coefficient regression models. *Annals of the Institute of Statistical Mathematics*, 51, 125–148.
3. Delicado, P. and Justel, A. (1999) Forecasting with missing data: Application to coastal wave heights. *Journal of Forecasting*, 18, 285–298.
2. Delicado, P. and del Río, M. (1997) Weighted nonparametric regression. *Communications in Statistics. Theory and methods*, 26(12), 2983–2998.
1. Delicado, P. and del Río, M. (1994) Bootstrapping the general linear hypothesis tests. *Computational Statistics and Data Analysis*, 18, 305–316.

**Other publications included at the Web of Science (discussion papers, conference proceedings with refereeing process)**

8. Delicado, P. (2019). Comments on: Data science, big data and statistics. *TEST*, 28 (2), 334–337. DOI: 10.1007/s11749-019-00639-5
7. Acar-Denizli, N., Delicado, P., Basarir, G. and Caballero, I. (2017). Functional linear regression models for scalar responses on remote sensing data: an application to Oceanography *Functional Statistics and Related Fields*. Springer Series: Contributions to Statistics. Eds. Aneiros, G., Bongiorno, E. G., Cao, R. and Vieu, P., pp. 15–21. ISBN: 978-3-319-55845-5
6. Delicado, P. (2015) Discussion of "Analysis of Spatio-Temporal Mobile Phone Data: a Case Study in the Metropolitan Area of Milan" by Piercesare Secchi, Simone Vantini and Valeria Vitelli. *Statistical Methods and Applications*, 2, 329-333. DOI: 10.1007/s10260-015-0320-0
5. Delicado, P. (2011) Dimensionality reduction for samples of bivariate density level sets: an application to electoral results. *Recent Advances in Functional Data Analysis and Related Topics*. Springer Series: Contributions to Statistics. Ed. Ferraty, F., pp. 71–76. ISBN: 978-3-7908-2736-1

4. Amela, I., Cedano, J., Delicado, P. and Querol, E. (2009) Friedreich ataxia: a computational dynamic model of the key proteins involved in the yeast Fe-S cluster biogenesis. *NEW BIOTECHNOLOGY*, **25**, Supplement 1, pp. S342–S343.
3. Delicado, P., Giraldo, R. and Mateu, J. (2008) Point-wise Kriging for spatial prediction of functional data. *Functional and Operatorial Statistics*. Springer Series: Contributions to Statistics. Eds. Dabo-Niang, S. and Ferraty, F., pp. 135–142. ISBN: 978-3-7908-2062-1
2. Boj, E., Delicado, P. and Fortiana, J. (2008) Local Linear Functional Regression based on Weighted Distance-Based Regression *Functional and Operatorial Statistics*. Springer Series: Contributions to Statistics. Eds. Dabo-Niang, S. and Ferraty, F., pp. 57–63 ISBN: 978-3-7908-2062-1
1. Delicado, P. and Smrekar, M. (2007) Mixture of nonlinear models: A Bayesian fit for principal curves. *Proceedings of the International Joint Conference on Neural Networks*, Pp. 195–200. Orlando, Florida, USA. ISBN: 978-1-4244-1380-5. DOI: 10.1109/IJCNN.2007.4370954.

### Papers in other refereed journals

1. Delicado, P. y Udina, F. (2001) ¿Cómo y cuánto fallan los sondeos electorales? *Revista Española de Investigaciones Sociológicas*, **96**, pp. 123–150.

### Chapters in books

4. Aluja, T. y Delicado, P.F. (2004) Modelización Estadística Paramétrica. *Introducción a la Minería de Datos*, Hernández-Orallo, J., Ramírez-Quintana, M.José y Ferri, Cèsar, editores. Pp. 166–212. Prentice Hall/Addison-Wesley (Madrid).
3. Delicado, P.F. y Aluja, T. (2004) Modelización Estadística No Paramétrica. *Introducción a la Minería de Datos*, Hernández-Orallo, J., Ramírez-Quintana, M.José y Ferri, Cèsar, editores. Pp. 213–236. Prentice Hall/Addison-Wesley (Madrid).
2. Delicado, P. (1999) New statistical methods for archaeological research. *New Techniques for Old Times*. *Computer Applications in Archaeology*, J. A. Barceló, editor. British Archaeological Reports International Series. ArchaeoPress, Oxford.
1. Mercader Prats, M. i Delicado, P. (1999) La dimensió econòmica de la pobresa a Catalunya, 1973–1990. *Les desigualtats socials a Catalunya*, Col·lecció Polítiques, 24, Editorial Mediterrània.

### Software

2. Boj, E., P. Delicado, J. Fortiana, A. Esteve and A. Caballé (2011) “dbstats R package: Distance based statistics”. Available at CRAN.
1. Giraldo, R., Delicado, P. and Mateu, J. (2010) “geofd R package: Spatial prediction for function value data”. Available at CRAN.

### Selected conference presentations:

21. Delicado, P. “Understanding complex models with ghost variables” (joint work with Peña, D.). 2nd Spanish Young Statisticians and Operational Researchers Meeting (SYSORM). El Escorial, 5th to 7th June, 2019. Plenary talk.
20. Delicado, P. “Functional Data Analysis in Demography”. III International Workshop on Advances in Functional Data Analysis. Castro Urdiales, Spain, 23th-24th May 2019. Invited short course (1 hour).

19. Delicado, P. “Variable relevance matrix in algorithmic models”. 7TH Iberian Mathematical Meeting. Évora (Portugal), October 12-14, 2018. Invited talk.
18. Chen, K., Delicado, P. and Müller, H-G. “Analyzing human mortality dynamics by marginal FPCA” as part of the session *Recent advances on functional data modelling and applications to life time data* at the 60th ISI World Statistics Congress (WSC) held from 26-31 July 2015 in Rio de Janeiro, RJ, Brazil. (Invited talk)
17. Delicado, P., P. Vieu. “Optimal level sets for representing a bivariate density function”. Third International Workshop on Functional and Operatorial Statistics (IWFOs 2014).
16. Delicado, P. “Big Data: Desafíos Para La Estadística”. Tercer Encuentro Conjunto de la Real Sociedad Matemática Española y la Sociedad Matemática Mexicana, Zacatecas, México, September 2014. (Invited talk)
15. Delicado, P., S. Broner. “Spatial clustering for the temporal evolution of country population pyramids?. Workshop ?Dependent Functional Data?, Goettingen, Alemania, 24 - 26 January 2013. (Invited talk)
14. Delicado, P., S. Broner. “Spatial clustering for the temporal evolution of country population pyramids?. 6th International Conference of the ERCIM WG on COMPUTING & STATISTICS (ERCIM 2013). London, UK, December 2013. (Invited talk)
13. Delicado, P., S. Broner. “Static clustering for country population pyramids that evolves on time”. 5th International Conference of the ERCIM WG on COMPUTING & STATISTICS (ERCIM 2012). Oviedo, Spain. 1-3 December 2012. (Invited talk)
12. Delicado, P., S. Broner. “LISA map based on distances for functional data”. 46TH SCIENTIFIC MEETING OF THE ITALIAN STATISTICAL SOCIETY. Roma, Italia. June 20 - 22, 2012. (Invited talk)
11. Delicado, P., S. Broner. “Analyzing functional data with lattice spatial dependence: A generalization of LISA map”. 1st Conference of the International Society for NonParametric Statistics, June 15-19, 2012 - Chalkidiki, Greece. (Invited talk)
10. Delicado, P. “Dimensionality reduction for samples of bivariate density level sets: An application to electoral results”. International Workshop on Functional and Operatorial Statistics (IWFOs 2011). Santander, Spain. June 16-18, 2011.
9. Delicado, P., A. Hernandez, G. Lugosi. “A support convexity test with application to nonlinear dimensionality reduction”. 3rd International Conference of the ERCIM WG on COMPUTING & STATISTICS (ERCIM’10). London, UK. 10-12 December 2010. (Invited talk)
8. Delicado, P. “Estimación no paramétrica de funciones”. XX Simposio de Estadística, Universidad Nacional de Colombia, Santa Marta, Colombia. August 11-15, 2010. (Tutorial course).
7. Delicado, P. “Clasificación para datos funcionales con dependencia espacial”. XX Simposio de Estadística, Universidad Nacional de Colombia, Santa Marta, Colombia. August 11-15, 2010. (Invited talk)
6. Delicado, P. “Dimensionality reduction when data are density functions”. SIS-2009: Statistical Methods for the Analysis of Large Data Sets. Italian Statistical Society. Pescara, Italia. September 23-25, 2009. (Invited talk)
5. Delicado, P., Giraldo, R., Comas, C., Broner, S., Mateu, J. “Spatial statistics for functional data”. International Workshop on Spatio-Temporal Modelling (METMA4). Alghero, Cerdeña, Italia. September 24-26, 2008. (Invited talk)
4. Delicado, P. and Smrekar, M. “Mixture of nonlinear models: A Bayesian fit for principal curves”. 2007 International Joint Conference on Neural Networks, Orlando, USA. August 12-17 2007.

3. Delicado, P. “Functional ANOVA when data are a weighted sample of density functions”. Quatrièmes Journées de Statistique Fonctionnelle et Operationell STAPH’2006. Grenoble, Francia. June 15-16, 2006.
2. Delicado, P. “Remarks on local likelihood density estimation”. 6th World Congress of the Bernoulli Society for Mathematical Statistics and Probability. Barcelona, Spain. July 26-31, 2004.
1. Delicado, P., “Statistics in Archaeology”. 26th conference on Computer Applications and Quantitative Methods in Archaeology. Barcelona, Spain. March 1998. (Invited opening talk)

## Teaching activities

### Teaching at Universitat Politècnica de Catalunya:

#### Undergraduate courses:

- Degree in Data Science and Engineering: Probability and Statistics.
- Degree in Mathematics: Probability Theory, Mathematical Statistics.
- Degree in Statistics: Probability and Stochastic Processes, Mathematical Statistics, Nonparametric models, Data Mining.
- Degree in Computer Sciences: Probability and Statistics.

#### Graduate courses:

- Master in Statistics and Operation Research: Statistical Learning, Nonparametric Models, Spatial Statistics, Foundations of Medical Statistics, Data Mining, Multivariate Data Analysis.
- Erasmus Mundus Master in Data Mining and Knowledge Management, and Master in Innovation and Research in Informatics: Advanced Statistical Modeling (Teaching in English).
- Ph.D. in Statistics and Operation Research: Bayesian Statistics.

**Supervision of Master Projects (TFM):** Supervisor of 11 TFMs at the Master of Statistics and Operations Research UPC-UB.

**Supervision of Degree Projects (TFG,PFC):** Supervisor of 16 TFGs at the Degree of Statistics (or PFCs at Diplomatura or Licenciatura).

**Teaching at Universitat Pompeu Fabra:** Undergraduate courses on Probability, Statistics and Time Series for the Grades in Economics, Business Administration and Political Sciences.

**Teaching at Universidad Carlos III de Madrid:** Teaching Assistant at undergraduate courses on Mathematics, Probability, Statistics and Multivariate Analysis.

### Textbooks

2. Romo, J., Cuevas, J., Delicado, P., Berrendero, J. R. (2001) *Euler. Matemáticas Aplicadas a las Ciencias Sociales 2*. Editorial SM. ISBN: 84-348-7448-2.
1. Romo, J., Cuevas, J., Delicado, P. (2000) *Euler. Matemáticas Aplicadas a las Ciencias Sociales 1*. Editorial SM. ISBN: 84-348-6918-7.

## Additional information

**Invited talks at universities:** ITAM (México), Umeå University (Umeå, Suecia), Universidad de El Salvador, Università Bocconi de Milan (Italia), Université Paul Sabatier (Toulouse, France), University of California at Berkeley (USA), University of California at Davis (USA), Alicante, Autònoma de Barcelona, Autònoma de Madrid, Bilbao, Burgos, Carlos III de Madrid, Complutense de Madrid, Girona, Rey Juan Carlos, Pompeu Fabra, Politècnica de Catalunya, Pública de Navarra, Sevilla, Vigo.



**Reviewing for science foundations:**

- Agencia Nacional de Evaluación y Prospectiva (ANEP), Spain.
- National Science Foundation, USA.
- Social Sciences and Humanities Research Council of Canada.
- Romanian National Council for Development and Innovation.

**Ph.D. committees:** Universitat Politècnica de Catalunya, Universidad Carlos III de Madrid (three times), Universitat de Barcelona (twice), Univetrsitat Pompeu Fabra, Monash University (Australia).

**Referee for journals:** (at least once)

1. Advances in Data Analysis and Classification.
2. Annals of Statistics.
3. Annals of the Institute of Statistical Mathematics.
4. Bernoulli Journal.
5. Biometrika.
6. British Journal of Mathematics & Computer Science.
7. Chemometrics and Intelligent Laboratory Systems.
8. Communications in Statistics. Theory and Methods.
9. Computational Statistics and Data Analysis.
10. Computational Statistics.
11. Data Mining and Knowledge Discovery.
12. Econometrics and Statistics.
13. Electronic Journal of Statistics.
14. Estadística Española.
15. ESTADISTICA: Journal of the Inter-American Statistical Institute.
16. IEEE Information Theory.
17. IEEE Transactions on Pattern Analysis and Machine Intelligence.
18. IIE Transactions.
19. Journal of Classification.
20. Journal of Computational and Graphical Statistics.
21. Journal of Multivariate Analysis.
22. Journal of Nonparametric Statistics.
23. Journal of Statistical Planning and Inference.
24. Journal of the American Statistical Association (JASA).
25. Metrika.
26. Neural Computing and Applications.
27. Population Studies.
28. Psychometrika.
29. Quality and Reliability Engineering International.
30. Revista Colombiana de Estadística.
31. Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales: Serie A: Matemáticas.
32. Revista Matemática Complutense.
33. Sankhya.

34. Sociological Methods and Research.
35. SORT (Statistics and Operations Research Transactions, formerly Qüestiió).
36. Spatial Economic Analysis.
37. Statistical Inference for Stochastic Processes.
38. Statistical Methodology.
39. Statistical Methods and Applications.
40. Statistics and Computing.
41. Statistics and Probability Letters.
42. Stoch. Environ. Res. Risk. Assess. (SERRA).
43. TEST: A journal of the Spanish Statistical Society.

**Technology and Knowledge Transfer:**

- 2001-2005. Statistical consulting for the company SEIF-88 (a Contract Research Organization working for pharmaceutical companies). Tasks performed ranged from calculations of sample sizes for clinical trials to complete development of the final report for approval of a new application for a drug. I was the only member of the research team. Total turnover: 18.916,23 Euros.
- 2001. *Informe para la Cátedra AGBAR-Automotive sobre características del muestreo en la investigación sobre accidentes.*
- 2002. *Citicolina. Ensayo Clínico de Fase III. Elección de una diseño eficiente.* Research team with 3 people coordinated by Erik Cobo. Total turnover: 14.850 Euros.
- 2004: *Classe social i estil de vida. Explotació del PAD mitjançant l'anàlisi de correspondències múltiple.* Consulting tasks for Fundació Bofill. I was the only member of the research team.
- 2016. *Consulting tasks for the Agència de Salut Pública Catalana on the Seasonal Influenza Epidemic.* Total turnover: 280 Euros. I was the only member of the research team.
- 2017. *Consulting tasks for AQU Catalunya about the ESTUDI D'INSERCIÓ LABORAL*, with special attention to bootstrap and permutation tests on stratified sampling. Total turnover: 2.302 Euros. I was the only member of the research team.
- 2018 (currently running). Statistical support to the project *Efectes beneficiosos de la quinoa en pacients diabètics*, for the Consorci d'Atenció Primària de Salut Barcelona Esquerra (CAPSBE), with special attention to Functional Data Analysis applications. Research team with 3 people coordinated by Pedro Delicado. Budget: 10.000 Euros.