

CURRICULUM VITAE

Jorge MATEU

1. ADDRESS

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2. EDUCATION-CAREER

- [1987-92] *Undergraduate Studies in Mathematics and Statistics*, Faculty of Mathematics, University of Valencia.
- [1992-94] *320 hours of Ph.D courses*, Department of Mathematics, University of Valencia.
- [1995] *M.Sc. by thesis "Procesos Puntuales: Modelización y Estimación de los Modelos Markov"*, Department of Mathematics, University of Valencia.
- [1998] *Ph.D. by thesis "Spatial Gibbs Point Processes: Simulation and Estimation"*, Department of Mathematics, University of Valencia.

3. PROFESSIONAL EXPERIENCE

Permanent Appointments

- [1 October 1992-5 November 1992] *Grant Holder*, Department of Statistics and Operations Research, University of Valencia, Spain.
- [5 November 1992-12 July 2000] *Assistant Professor of Statistics*, Department of Mathematics, University Jaume I of Castellón, Spain.
- [12 July 2000- 25 September 2007] *Associate Professor of Statistics*, Department of Mathematics, University Jaume I of Castellón, Spain.
- [25 September 2007-Present] *Full Professor of Statistics*, Department of Mathematics, University Jaume I of Castellón, Spain.

Visiting Positions

- 1993 (2 months) *Visiting Research Student*, Department of Mathematics and Statistics, Lancaster University, Lancaster, UK.
- 1996 (1 month) *Visiting Research Student*, Department of Mathematics and Statistics, Lancaster University, Lancaster, UK.
- 1997 (2 months) *Visiting Research Student*, Department of Mathematics and Statistics, Lancaster University, Lancaster, UK.
- 1998 (2 months) *Visiting Lecturer*, Department of Mathematics and Statistics, Lancaster University, Lancaster, UK.

4. RESEARCH INTERESTS

My main areas of methodological and practical research interest concern spatial statistics, in particular spatial point processes and spatio-temporal geostatistics, motivated by applications in the ecological and environmental sciences. In particular, most of the published applied papers analyse

data coming from ecology or the environment (forest fires, forest species, wild animals, soil contamination, air pollution, etc). I have also worked in Monte Carlo inference, multivariate statistics and non-parametric smoothing.

5. TEACHING EXPERIENCE

I have developed and taught a wide range of courses in a university context, including undergraduate and postgraduate degree courses in probability and statistics, and statistics serving teaching aimed at particular client groups. In particular, I have developed and taught short courses for master and Ph.D. programmes in Spain (Department of Statistics, University of Navarra; Department of Statistics, University of Zaragoza; Addlink, Scientific Software, Barcelona, Madrid; Department of Mathematics and Statistics, Complutense University of Madrid; Merck & Sharp Dohme, Madrid; General Hospital of Castellon; Health Institute Carlos III, Madrid; Spanish Oceanographic Institute, Madrid; Lucent Technologies, Madrid; Harbour of Barcelona; International Postgraduate Course on Geographic Information Analysis).

6. RESEARCH GRANTS

Joint Principal Investigator

- Statistics for spatial distributions and image analysis. *Bancaja*, 1993-1994. **10645 EUROS**
- Statistics for spatio-temporal data. Applications to Economy, Medicine and Biology. *Bancaja*, 1995-1997. **24522 EUROS**
- Analysis of sequences of digital images: application to eye disease diagnosis. *Generalitat Valenciana*, 1995-1996. **41470 EUROS**
- Generation of computational languages for complex system modelling. *Generalitat Valenciana*, 1999-2000. **4808 EUROS**
- Statistical modelling of Mediterranean ecosystems after forest fires. *Generalitat Valenciana*, 1998-2000. **15025 EUROS**
- Application of Stochastic Geometry models to ceramic design. *Generalitat Valenciana*, 2000-2001. **6912 EUROS**
- Abstract categories in genomic regulation networks. *Ministerio de Educación y Ciencia* (Programme EXPLORA 2006), 2006-2007. **13150 EUROS**.
- Network on corporative research in computacional biomedicine (CONBIOMED). *Ministerio de Sanidad y Consumo*, 2008. **30616 EUROS**
- Research collaboration with the Euromediterranean Institute of Water: Optimization and modelling of transport of plaguicides and fertilizers, 2009. **16390 EUROS**.
- OBENOMICS: plataforma Web para la gestión e integración del conocimiento en Epidemiología Genómica de la Obesidad. *Conselleria de Sanidad, Generalitat Valenciana, AP-050/09*, 2009. **6000 EUROS**.
- NUTRIFIS: Development of a computational biomedical tool to integrate food ingestion and physical activity in paedriatic attention. *Instituto de Salud Carlos III - Fondo de investigaciones Sanitarias (ISCIII-FIS), Ministerio de Ciencia e Innovación (MICINN)*, 2009-2010. **40172 EUROS**.
- Metodi di integrazione delle fonti energetiche rinnovabili e monitoraggio satellitare dell'impatto ambientale/Integration methods for greenhouse energy sources and monitoring of the environmental impact. *Ente Gestore di Regione Lombardia (RL2009)*, 2011-2012.

Principal Investigator

- Investigation of spatial dimension in economical structures. *Generalitat Valenciana*, 2000. **7243 EUROS**

- Detection of features in noisy images by means of spatial point processes. *Bancaja*, 2001-2003. **13449 EUROS**
- Modelling spatio-temporal environmental processes. *Ministerio (BFM2001-3286)*, 2002-2004. **18420 EUROS**
- Mathematical and statistical modelling of the aquifer of the Castellon Plain (Spain). *Diputación de Castellón*, 2003-2004. **12000 EUROS**
- Spatio-temporal statistical models for the evaluation and characterization of forest fires indexes in the province of Castellon (Spain). *Fundación Davalos-Fletcher de Castellón*, 2003-2004. **8000 EUROS**
- Law determination and mathematical modelling for the extraction, logistics and treatment of certain types of residuals. *I+D+I Generalitat Valenciana*, 2003-2005. **32432 EUROS**
- The development of statistical data analysis of marked point patterns*. *ESRI* (Contract No. 2003C1389), 380 New York Street, Redlands, CA 92373-8100, USA, 2003-2004. **24000 EUROS**
- Spatial distribution of economical activity in the European Union (1980-2000). *Instituto Valenciano de Investigaciones Económicas (IVIE)*, 2004. **4500 EUROS**
- Theoretical formulation and practical analysis of three-dimensional spatial structures through stochastic point processes. *Generalitat Valenciana (GV04A/724)*, 2004-2005. **16400 EUROS**
- Three-dimensional marked point processes for the statistical analysis of spatial patterns. Applications to problems in astronomy and geology. *Bancaja*, 2005-2007. **22050 EUROS**
- Statistical modelling for spatio-temporal data. Applications to mortality dynamic tables and evoked potentials in Psychology and Neurophysiology. *Ministerio (MTM2004-06231)*, 2005-2007. **50000 EUROS**
- New methodological developments for space-time covariances and their applications. *Ministerio (MTM2007-62923)*, 2008-2010. **82885 EUROS**
- New families of space-time non-separable, non-stationary and anisotropic covariance functions: theory and applications. *Bancaja*, 2009-2011. **27000 EUROS**.
- Selected main problems in stochastic space-time processes. *Ministerio (MTM2010-14961)*, 2011-2013. **79500 EUROS**.

7. SPECIAL INVITED LECTURES

- Keynote Speaker by paper “*On the MLE for a spatial point pattern*”, 8th International Workshop on Stereology, Stochastic Geometry and Image Analysis, Sandbjerg Manor (Denmark), 1995.
- Keynote Speaker, by paper “*The pseudo-likelihood estimation method for marked Gibbs processes*”, Stochastic Geometry: Theory and Applications, Toulouse (France), 1996.
- Keynote Speaker, by paper “*A comparative study of simulation methods for marked Gibbs processes*”, 9th International Workshop on Stereology, Stochastic Geometry and Image Analysis, Comillas (Spain), 1997.
- Invited Paper “*Extensions to the variogram estimator*”, SEMSTAT, Eindhoven (The Netherlands), 1999.
- Keynote Speaker, by paper “*A comparison of model-based and design-based approaches to the analysis of replicated spatial point processes*”, 10th International Workshop on Stochastic Geometry, Stereology and Image Analysis, Calgary (Canada), 1999.
- Keynote Speaker, by paper “*Spectral tests of nonstationarity for spatial processes*”, Environmental Modeling and Statistical Analysis, Granada (Spain), 2002.
- Invited Paper “*Detection and estimation of spatial patterns in terrestrial plant communities*”, Alcalá 2nd International Conference on Mathematical Ecology, Alcalá de Henares (Spain), 2003.
- Keynote Speaker, by paper “*Spatial smoothing through a non-negative kernel family*”, IWAP-Second International Workshop in Applied Probability, University of Piraeus (Greece), 2004.
- Keynote Speaker, by paper “*New classes of covariance functions for spatio-temporal modelling*”,

2nd Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes, METMA, Granada (Spain), 2004.

●Invited Paper “*Understanding three-dimensional biological images through stochastic modelling*”, Primer Congreso Conjunto de Matemáticas RSME-SCM-SEIO-SEMA (MAT.ES 2005), Valencia (Spain), 2005.

●Keynote Speaker, by paper “*Methods and models for spatio-temporal modelling*”, GRASPA, Bertinoro (Italy), 2005.

●Keynote Speaker, by paper “*Spatio-temporal georeferenced data analysis through copulas and Dagum distributions*”, Spatial Econometrics and Statistics Workshop, Toulouse (France), 2005.

●Keynote Speaker, by paper “*Space-time point process models for wildfire hazard evaluation*”, Workshop on Forest Fires and Point Processes, Toronto (Canada), 2005.

●Keynote Speaker, by paper “*Modelling space-time interactions for stochastic systems*”, New Themes and Techniques in Complex Systems. Lake District (UK), 2005.

●Keynote Speaker, by paper “*A deeper look at some properties of space-time covariance functions*”, Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes, METMA, Pamplona (Spain), 2006.

●Invited Paper “*Building space-time covariance functions through quasi-arithmetic means*”, Taipei International Statistical Symposium and ICSA International Conference, Academia Sinica, Taipei (Taiwan), 2007.

●Invited Paper “*Challenging space-time complexity: a composite likelihood approach*”, 18th annual meeting of the International Environmetrics Society-TIES, Mikulov (Czech Republic), 2007.

●Invited Discussant in the invited paper meeting (IPM08): “*Recent Advances in Spatial Statistics with Environmental Applications*”, 56th Session of ISI, Lisboa (Portugal), 2007.

●Invited Paper “*The Dagum family and the mystery of its permissibility conditions*”, 7th French-Danish Workshop on Spatial Statistics and Image Analysis in Biology, Toulouse (France), 2008.

●Keynote Speaker, by paper “*Spatial and spatio-temporal dependencies: an excursus through biometrical applications*”, II Iberian Mathematical Meeting, Badajoz (Spain), 2008.

●Keynote Speaker, by paper “*Analysis of spatial and space-time stochastic dependencias: methods and applications*”, Workshop on Oceanography and Statistical and Computational Hydraulics, Santiago de Compostela (Spain), 2009.

●Keynote Speaker, by paper “*Spatial and spatio-temporal point pattern analysis. An overview and applications to forest fires*”, Workshop on Strategic Data Analysis, Santiago de Compostela (Spain), 2010.

●Invited Paper “*Composite likelihood-based estimation methods for space-time stochastic processes*”, Fifth International Workshop in Applied Probability, Madrid (Spain), 2010.

●Invited Paper “*A coherence-based measure for spatial classification*”, Fifth International Workshop in Applied Probability, Madrid (Spain), 2010.

●Invited Paper “*Spatial point pattern classification with environmental applications*”, Annual Meeting of the German Statistical Society, Nuremberg (Germany), 2010.

●Invited Paper “*Spatially correlated functional data*”, Spatial Data Methods for Environmental and Ecological Processes, Puglia (Italy), 2011.

8. CONFERENCE ORGANIZATION (selection)

●*First Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes (METMA1)*. 28-31 October **2001**, Benicassim, Castellón (Spain).

●*ISI International Conference on Environmental Statistics and Health*. July **2003**, Santiago de Compostela (Spain).

●*International Conference on Spatial Point Processes and their Applications*. April **2004**, Castellón (Spain).

- *Second Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes (METMA2)*. June **2004**, Granada (Spain).
- *International Seminar on Special Functions with a View on Building Space-Time Covariance Functions*. 24-28 April, 12-16 June **2006**, Castellon (Spain)
- *International Seminar on Copula Modelling*. July **2006**, Castellon (Spain)
- *International Workshop on Spatio-Temporal Modelling (METMA4)*. September **2008**, Algher (Sardinia, Italy)

9. REFEREED ARTICLES (a selection since 2000)

1. USO, J.L., MATEU, J. & LOPEZ, J.A. (2000). Medea: Software development for prediction of mediterranean forest degraded areas. *Advances in Engineering Software*, **31**, 185-196.
2. MATEU, J. & MONTES, F. (2000). Approximate maximum likelihood estimation for a spatial point pattern. *Questio*, **24**, 3-25.
3. ALBERT, J.M., MATEU, J. & PERNIAS, J.C. (2000). Spatial structure analysis using planar indices. *Questio*, **24**, 27-51.
4. DIGGLE, P.J., MATEU, J. & CLOUGH, H. (2000). A comparison between parametric and non-parametric approaches to the analysis of replicated spatial point patterns. *Advances in Applied Probability (SGSA)*, **32**, 331-343.
5. MATEU, J. (2000). Second-order characteristics of spatial marked processes with applications. *Journal of Nonlinear Analysis*, **1**, 145-162.
6. CORTES, M., VILLACAMPA, Y., MATEU, J. & USO, J.L. (2000). A new methodology for modelling highly structured systems. *Environmental Modelling & Software*, **15**, 461-470.
7. MATEU, J. & MONTES, F. (2001). Likelihood inference for Gibbs processes in the analysis of spatial point patterns. *International Statistical Review*, **69**, 81-104.
8. MATEU, J. (2001). Parametric procedures in the analysis of replicated spatial point patterns. *Biometrical Journal*, **43**, 375-394.
9. MATEU, J. & MONTES, F. (2001). Pseudo-likelihood inference for Gibbs processes with exponential families through generalized linear models. *Statistical Inference for Stochastic Processes*, **4**, 125-154.
10. ALBERT, J.M., MATEU, J. & PERNIAS, J.C. (2002). Modelling of spatial point processes derived from a sequence of auto-Poisson lattice schemes. *Environmental Modelling & Software*, **17(2)**, 105-123.
11. MATEU, J. (2002). Statistical procedures for spatial point pattern recognition. *Questio*, **26**, 29-59.
12. MATEU, J. & LORENZO, G. (2002). Detección de rasgos en imágenes binarias mediante procesos puntuales espaciales marcados. *Questio*, **26**, 61-85.
13. MATEU, J. & MONTES, F. (2002). Discussion to the paper "Spatial-Temporal Nonlinear Filtering Based on Hierarchical Statistical Models" by Irwin, Cressie & Johannesson. *Test*, **11**, 249-302.
14. MATEU, J., MONTES, F. & FUENTES, M. (2003). Recent advances in space-time statistics with applications to atmospheric data: An overview. *Journal of Geophysical Research*, **108 (D24)**.
15. BODAS-SALCEDO, A., LOPEZ-BAEZA, E., MARTINEZ, F., MATEU, J. & MONTES, F. (2003). Spatio-temporal modeling and prediction of solar radiation. *Journal of Geophysical Research*, **108 (D24)**.
16. MATEU, J., ARTES, J. & LOPEZ, J.A. (2004). Computational issues for perfect simulation in spatial point patterns. *Communications in Nonlinear Science and Numerical Simulation*, **9**, 229-240.
17. JORDAN, M.M., NAVARRO, J., GARCIA, E., MATEU, J. & JUAN, P. (2004). Spatial dynamics of soil salinity under arid and semiarid conditions: Geological and environmental implications. *Environmental Geology*, **45**, 448-456.
18. MATEU, J., MONTES, F. & PLAZA, M. (2004). The 1970 US draft lottery revisited: a spatial analysis. *Journal of The Royal Statistical Society-Series C. Applied Statistics*, **53**, 219-229.

19. GREGORI, P., van LIESHOUT, M.N.M. & MATEU, J. (2004). Mixture formulae for shot noise weighted point processes. *Statistics and Probability Letters*, **67** (4), 311-320.
20. MATEU, J. & JUAN, P. (2004). A spectral test of nonstationarity for spatial processes. *Quantitative Geology and Geostatistics*, **13**, 213-224.
21. AXIS, J. & MATEU, J. (2004). Spatio-temporal modelling of benthic biological species. *Journal of Environmental Management*, **71** (1), 67-77.
22. STOICA, R.S., MARTINEZ, V.J., MATEU, J. & SAAR, E. (2005). Detection of cosmic filaments. *Astronomy and Astrophysics*, **434**, 423-432.
23. STOICA, R.S., GREGORI, P. & MATEU, J. (2005). Simulated annealing and object point processes: tools for analysis of spatial patterns. *Stochastic Processes and Their Applications*, **115**, 1860-1882.
24. MATEU, J. & SAURA, F. (2005). Discussion to the paper "Residual analysis for spatial point processes" by Baddeley, Turner, Møller & Hazelton. *Journal of the Royal Statistical Society B*, **67**, 617-666.
25. MATEU, J. & LOPEZ, J.A. (2005). Cluster spatial point process models for cosmological applications. *Journal of Computational Methods in Sciences and Engineering*, **5** (2), 115-139.
26. SAURA, F. & MATEU, J. (2006). Estimating mark functions through spectral analysis for marked point patterns. *Communications in Statistics: Theory and Methods*, **35** (5), 861-886.
27. PORCU, E., GREGORI, P. & MATEU, J. (2006). Nonseparable stationary anisotropic space-time covariance functions. *Stochastic Environmental Research and Risk Assessment*, **21**, 113-122.
28. COMAS, C. & MATEU, J. (2007). Modelling forest dynamics: a perspective from point process methods. *Biometrical Journal*, **49** (2), 176-196.
29. YU, K., MATEU, J. & PORCU, E. (2007). A kernel-based method for nonparametric estimation of variograms. *Statistica Neerlandica*, **61** (2), 173-197.
30. HUANG, H.C., MARTINEZ, F., MATEU, J. & MONTES, F. (2007). Model comparison and selection for stationary space-time models. *Computational Statistics and Data Analysis*, **51**, 4577-4596.
31. PORCU, E., MATEU, J., ZINI, A. & PINI, R. (2007). Modelling spatio-temporal data: a new variogram and covariance structure proposal. *Statistics and Probability Letters*, **77**, 83-89.
32. RENSHAW, E., MATEU, J. & SAURA, F. (2007). Disentangling mark/point interaction in marked point processes. *Computational Statistics and Data Analysis*, **51**, 3123-3144.
33. PORCU, E., MATEU, J. & BEVILACQUA, M. (2007). Covariance functions which are stationary or nonstationary in space and stationary in time. *Statistica Neerlandica*, **61** (3), 358-382.
34. PORCU, E. & MATEU, J. (2007). Mixture-based modeling for space-time data. *Environmetrics*, **18**, 285-302.
35. MATEU, J., JUAN, P. & PORCU, E. (2007). Geostatistical analysis through spectral techniques: some words of caution. *Communications in Statistics: Computation and Simulation*, **36** (5), 1035-1051.
36. MATEU, J. (2007). Discussion to the paper "Modern statistics for spatial point processes" by Møller & Waagepetersen. *Scandinavian Journal of Statistics*, **34** (4), 643-684.
37. PORCU, E., NICOLIS, O. & MATEU, J. (2007). A note on decoupling of local and global behaviour for the Dagum random field. *Probabilistic Engineering Mechanics*, **22**(4), 320-329.
38. PORCU, E., GREGORI, P. & MATEU, J. (2007). La descente et la montée étendues: the spatially d-anisotropic and the spatiotemporal case. *Stochastic Environmental Research and Risk Assessment*, **21** (6), 683-693.
39. MATEU, J. (2007). Computing limiting stochastic processes for spatial structure detection. *Journal of Numerical Analysis, Industrial and Applied Mathematics*, **2** (1-2), 79-102.
40. COMAS, C. & MATEU, J. (2007). On soft- and hard-particle motions for stochastic marked point processes. *Journal of Statistical Computation and Simulation*, **77** (12), 1091-1121.

41. MATEU, J., PORCU, E., CHRISTAKOS, G. & BEVILACQUA, M. (2007). Fitting negative spatial covariances to geothermal field temperatures in Nea Kessani (Greece). *Environmetrics*, **18**, 759–773.
42. MATEU, J., LORENZO, G. & PORCU, E. (2007). Detecting features in spatial point processes with clutter via local indicators of spatial association. *Journal of Computational and Graphical Statistics*, **16** (4), 968-990.
43. COMAS, C. & MATEU, J. (2008). Growing and reproducing particles evolving through space and time. *Métrica*, **67** (2), 145-169.
44. GREGORI, P., PORCU, E., MATEU, J. & SASVARI, Z. (2008). On potentially negative space time covariances obtained as sum of products of marginal ones. *Annals of the Institute of Statistical Mathematics*, **60**, 865–882.
45. MARTINEZ, F., MATEU, J., MONTES, F., BODAS-SALCEDO, A. & LOPEZ-BAEZA, E. (2008). A comparative analysis of different spatial sampling schemes: modelling of SSRB data. *International Journal of Remote Sensing*, **29** (6), 1635-1647.
46. MATEU, J., PORCU, E. & GREGORI, P. (2008). Recent advances to model anisotropic space-time data. *Statistical Methods & Applications*, **17**, 209-223.
47. PORCU, E., MATEU, J. & SAURA, F. (2008). New classes of covariance and spectral density functions for spatio-temporal modelling. *Stochastic Environmental Research and Risk Assessment*, **22** (1), 65-79.
48. COMAS, C. & MATEU, J. (2008). On random and Gibbsian particle motions for point processes evolving in space and time. *Communications in Statistics: Simulation and Computation*, **37** (2), 380-395.
49. DEBON, A., MONTES, F., MATEU, J., PORCU, E. & BEVILACQUA, M. (2008). Modelling residuals dependence in dynamic life tables: a geostatistical approach. *Computational Statistics and Data Analysis*, **52**, 3128-3147.
50. COMAS, C. & MATEU, J. (2008). Space-time dependence dynamics for birth-death point processes. *Statistics and Probability Letters*, **78** (16), 2715-2719.
51. BERG, C., MATEU, J. & PORCU, E. (2008). The Dagum family of isotropic correlation functions. *Bernoulli*, **14** (4), 1134–1149.
52. RENSHAW, E., COMAS, C. & MATEU, J. (2009). Analysis of forest thinning strategies through the development of space-time growth-interaction simulation models. *Stochastic Environmental Research and Risk Assessment*, **23** (3), 275-288.
53. COMAS, C., PALAHI, M., PUKKALA, T. & MATEU, J. (2009). Characterising forest spatial structure through inhomogeneous second order characteristics. *Stochastic Environmental Research and Risk Assessment*, **23** (3), 387-397.
54. PORCU, E., CRUJEIRAS, R., MATEU, J. & GONZALEZ-MANTEIGA, W. (2009). Spatial and spatio-temporal dependence of the periodogram for regularly spaced data. *Theory of Probability and its Applications*, **53** (2), 349-356.
55. PORCU, E., GREGORI, P., MATEU, J. (2009). Archimedean spectral densities for nonstationary space-time Geostatistics. *Statistica Sinica*, **19** (1), 273-286.
56. PORCU, E., MATEU, J. & CHRISTAKOS, G. (2009). Quasi-arithmetic means of covariance functions with potential applications to space-time data. *Journal of Multivariate Analysis*, **100** (8), 1830-1844.
57. GIRALDO, R., DELICADO, P. & 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.
58. BEVILACQUA, M., MATEU, J., PORCU, E., ZHANG, H. & ZINI, A. (2010). Weighted composite likelihood-based tests for space-time separability of covariance functions. *Statistics and Computing*, **20** (3), 283-293.
59. DELICADO, P., GIRALDO, R., COMAS, C. & MATEU, J. (2010). Statistics for spatial functional data: some recent contributions. *Environmetrics*, **21**, 224-239.

60. MATEU, J., MONTES, F. & PORCU, E. (2010). Spatio-temporal stochastic modelling: environmental and health processes. *Environmetrics*, **21**, 221-223.
61. MATEU, J., LORENZO, G. & PORCU, E. (2010). Features detection in spatial point processes via multivariate techniques. *Environmetrics*, **21**, 400-414.
62. MARTINEZ-RUIZ, F., MATEU, J., MONTES, F. & PORCU, E. (2010). Mortality risk assessment through stationary space-time covariance functions. *Stochastic Environmental Research and Risk Assessment*, **24**, 519-526.
63. MATEU, J. (2010). Spatiotemporal dynamics of natural phenomena. *Stochastic Environmental Research and Risk Assessment*, **24**, 483-485.
64. PORCU, E., MATEU, J. & COMAS, C. (2010). Continuous spatio-temporal dynamics of stochastic processes. *Communications in Statistics: Theory and Methods*, **39**, 3472-3484.
65. PORCU, E., MATKOWSKI, J. & MATEU, J. (2010). On the non-reducibility of non-stationary correlation functions to stationary ones under a class of mean-operator transformations. *Stochastic Environmental Research and Risk Assessment*, **24** (5), 599-610.
66. COMAS, C., MATEU, J. & SARKKA, A. (2010). A third order point process characteristic for multi-type point processes. *Statistica Neerlandica*, **64**, 19-44.
67. MATEU, J. (2010). Discussion to the paper: A general science-based framework for dynamical spatio-temporal models, by C.K. Wikle & M.B. Hooten. *Test*, **19**, 452-455.
68. COMAS, C. & MATEU, J. (2011). Statistical inference for Gibbs point processes based on field observations. *Stochastic Environmental Research and Risk Assessment*, **25** (2), 287-300.
69. COMAS, C., DELICADO, P. & MATEU, J. (2011). A second order approach to analyse spatial point patterns with functional marks. *Test*, **20**, 503-523.
70. JUAN, P., MATEU, J., JORDAN, M.M., MELENDEZ-PASTOR, I., NAVARRO-PEDRENO, J. & MATAIX-SOLERA, J. (2011). Geostatistical methods to identify and map spatial variations of soil salinity. *Journal of Geochemical Exploration*, **108**, 62-72.
71. GIRALDO, R., DELICADO, P. & MATEU, J. (2011). Ordinary kriging for function-valued spatial data. *Environmental and Ecological Statistics*, **18**, 411-426.
72. FERNANDEZ-AVILES, G., MONTERO, J.M. & MATEU, J. (2011). Mathematical genesis of the spatio-temporal covariance functions. *Journal of Mathematics and Statistics*, **7**, 37-44.
73. MATEU, J. (2011). Discussion to the paper: An explicit link between Gaussian fields and Gaussian Markov random fields: the stochastic partial differential equation approach, by Lindgren, F., Rue, H., Lindström, J. *Journal of the Royal Statistical Society, B*, **73**, 423-498.
74. SAEZ, M. & MATEU, J. (2011). Discussion to the paper: An explicit link between Gaussian fields and Gaussian Markov random fields: the stochastic partial differential equation approach, by Lindgren, F., Rue, H. & Lindstrom, J. *Journal of the Royal Statistical Society, B*, **73**, 423-498.
75. GIRALDO, R., DELICADO, P. & MATEU, J. (2011). Geostatistics with infinite dimensional data: a generalization of cokriging and multivariable spatial prediction. *Matemática: ICM-ESPOL*, **9**, 16-21.
76. COMAS, C., MATEU, J. & DELICADO, P. (2011). On tree intensity estimation for forest inventories: some statistical issues. *Biometrical Journal*. DOI: **10.1002/bimj.201000 193**.
77. MATEU, J., FERNANDEZ-AVILES, G. & MONTERO, J.M. (2011). On a class of non-stationary, compactly supported spatial covariance functions. *Stochastic Environmental Research and Risk Assessment*. DOI: **10.1007/s00477-011-0510-8**.
78. FUNWI-GABGA, N. & MATEU, J. (2011). Understanding the nesting spatial behaviour of gorillas in the Kagwene Sanctuary, Cameroon. *Stochastic Environmental Research and Risk Assessment*. DOI: **10.1007/s00477-011-0541-1**.
79. JUAN, P., MATEU, J. & SAEZ, M. (2012). Pinpointing spatio-temporal interactions in wildfire patterns. *Stochastic Environmental Research and Risk Assessment*. DOI: **10.1007/s00477-012-0568-y**.

80. BEVILACQUA, M., GAETAN, C., MATEU, J. & PORCU, E. (2012). Estimating space and space-time covariance functions for large data sets: a weighted composite likelihood approach. *Journal of the American Statistical Association (JASA)*. **Forthcoming**.
81. PORCU, E., MATEU, J., GREGORI, P. & OSTOJA-STARZEWSKI, M. (2012). New classes of spectral densities for lattice processes and random fields built from simple univariate marginals. *Stochastic Environmental Research and Risk Assessment*. **Forthcoming**.
82. MATEU, J. (2012). Discussion to the paper: Statistical methods for healthcare regulation: rating, screening and surveillance, by Spiegelhalter, D., Sherlaw-Johnson, C., Bardsley, M., Blunt, I., Wood, C. & Grigg, O. *Journal of the Royal Statistical Society, A*, **175**. **Forthcoming**.
83. GIRALDO, R. & MATEU, J. (2012). Kriging for functional data. *Encyclopedia of Environmetrics, Second Edition..* El-Shaarawi, A.H. and Piegorsch, W.W. (eds.), J. Wiley & Sons, Chichester, UK. **Forthcoming**.
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85. MATEU, J. (2012). Weibull distribution. *Encyclopedia of Environmetrics, Second Edition..* El-Shaarawi, A.H. and Piegorsch, W.W. (eds.), J. Wiley & Sons, Chichester, UK. **Forthcoming**.
86. MATEU, J. (2012). Discussion to the paper: Quantifying the weight of evidence from a forensic fingerprint comparison: a new paradigm, by Neumann, C., Evett, I.W. & and Skerrett, J. *Journal of the Royal Statistical Society, A*, **175**. **Forthcoming**.
87. MADRID, A.E., ANGULO, J.M. & MATEU, J. (2012). Spatial threshold exceedance analysis through marked point processes. *Environmetrics*. **Forthcoming**.
88. MATEU, J. & ARAFAT, A. (2012). Discussion to the paper: Catching up faster by switching sooner: a predictive approach to adaptive estimation with an application to the Akaike information criterion–Bayesian information criterion dilemma, by van Erven, T., Grunwald, P. & de Rooij, S. *Journal of the Royal Statistical Society, B*, **74**. **Forthcoming**.
89. MATEU, J., RODRIGUEZ-CORTES, F. & GONZALEZ, J.A. (2012). Discussion to the paper: Optimum design of experiments for statistical inference, by Gilmour, S.G. & Trinca, L.A. *Journal of the Royal Statistical Society, C*, **61**. **Forthcoming**.
90. MATEU, J. & ARAFAT, A. (2012). Discussion to the paper: Constructing summary statistics for approximate Bayesian computation: semi-automatic approximate Bayesian computation, by Fearnhead, P. & Prangle, D. *Journal of the Royal Statistical Society, B*, **74**. **Forthcoming**.
91. SAEZ, M., BARCELO, M.A., TOBIAS, A., VARGA, D., OCAÑA-RIOLA, R., JUAN, P. & MATEU, J. (2012). Space-time interpolation of daily air temperatures. *Journal of Environmental Statistics*. **Forthcoming**.
92. URIA, J., MATEU, J. & IBANEZ, R. (2012). Importance of habitat heterogeneity and biotic processes in the spatial distribution of a riparian herb (*Carex remota* L.): a point process approach. *Stochastic Environmental Research and Risk Assessment*. DOI: [10.1007/s00477-012-0569-x](https://doi.org/10.1007/s00477-012-0569-x).
93. MATEU, J., MELO, O.O. & MELO, C.E. (2012). Discussion to the paper: Log-optimal economic evaluation of probability forecasts, by Johnstone, D.J. *Journal of the Royal Statistical Society, A*, **175**. **Forthcoming**.
94. GIRALDO, R., DELICADO, P. & MATEU, J. (2012). Hierarchical clustering of spatially correlated functional data. *Statistica Neerlandica*. **Forthcoming**.

10. BOOKS (selection)

1. *Spatio-Temporal Modelling of Environmental Processes. Proceedings of the I Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes* (2001). J. MATEU & F. MONTES (Eds.) Editorial Universitat Jaume I, Castellón, Spain. ISBN: 84-8021-368-X.
2. *Spatial Statistics Through Applications* (2002). J. MATEU & F. MONTES (Eds.) Editorial WITPress, Southampton, UK. ISBN: 1-85312-649-7.

3. *Proceedings of ISI International Conference on Environmental Statistics and Health* (2003). J. MATEU, D. HOLLAND & W. GONZALEZ-MANTEIGA (Eds.) Universidad de Santiago de Compostela, Spain. ISBN: 84-9750-154-3.
4. *Spatial Point Process Modelling and its Applications. Proceedings of the International Conference on Spatial Point Process Modelling and its Applications* (2004). A. BADDELEY, P. GREGORI, J. MATEU, R. STOICA & D. STOYAN (Eds). Colección Trabajos de Informática y Tecnología, Num 20. Editorial Universitat Jaume I, Castellón, Spain. ISBN: 84-8021-475-9.
5. *Case Studies in Spatial Point Process Models* (2005). A. BADDELEY, P. GREGORI, J. MATEU, R. STOICA & D. STOYAN (Eds). *Lecture Notes in Statistics*, 185. Springer-Verlag. ISBN: 0-387-28311-0.
6. *New Advances in Space-Time Random Field Modelling* (2008). E. PORCU & J. MATEU. Colección Trabajos de Informática y Tecnología, Num 28. Editorial Universitat Jaume I, Castellón, Spain. ISBN: 978-84-8021-650-0.
7. *Statistics for Spatio-Temporal Modelling* (2008). D. COCCHI, J. MATEU, F. MONTES, E. OTRANTO, E. PORCU & A. USAI (Eds). Editorial Democratica Sarda, Italy. ISBN: 88-6025-098-6.
8. *Positive Definite Functions: from Schoenberg to Space-Time Challenges* (2008). J. MATEU & E. PORCU (Eds). Editorial Universitat Jaume I. Department of Mathematics. ISBN: 978-84-612-8282-1.
9. *Stochastic Processes for Spatial Econometrics* (2009). J. MATEU, M. ALBERT, C. COMAS, V. ORTS, J.C. PERNIAS & E. PORCU. **Editorial Netbiblo, Spain**. ISBN: 978-84-974-5412-4.

11. SUPERVISION OF MASTER THESIS

1. *Spatial modelling of the mediterranean shrub (*Ulex parviflorus* pourr.) in connection to soil properties* . January 2000. Author: **Luis Roca** (Universitat de Valencia, Valencia, Spain).
2. *Empirical estimation of the theoretical distribution of words in natural language texts* . July 2000. Author: **Patricia Sastre** (Universidad Nacional del Centro de la Provincia de Buenos Aires, Azul, Argentina).
3. *Statistical tools for fitting and smoothing* . July 2000. Author: **Miguel Montenegro** (Universidad Tecnológica Metropolitana, Santiago de Chile, Chile).
4. *Features detection in point processes* . July 2000. Author: **Gil Lorenzo** (Universitat Jaume I, Castellón, Spain).
5. *Inhomogeneity in spatial point processes* . July 2000. Author: **Angeles Calduch** (Universitat Politècnica de Valencia, Valencia, Spain).
6. *Geostatistical analysis of rainfall erosivity in Castellon Province* . July 2001. Author: **Pablo Juan** (Universitat Jaume I, Castellón, Spain).
7. *Statistical time series analysis for environmental problems* . April 2003. Author: **Patricia Salvador** (Universitat Jaume I, Castellón, Spain).
8. *Point processes and spectral methods* . September 2004. Author: **Fuensanta Saura** (Universitat Jaume I, Castellón, Spain).
9. *Exact simulation for spatial point processes: CFTP method* . October 2004. Author: **Jordi Artés** (Universitat Jaume I, Castellón, Spain).
10. *Statistical modeling through copulas*. July 2008. Author: **Carlos Ayyad** (Universitat Jaume I, Castellón, Spain).
11. *Inconsistent estimation for space and space-time random fields*. September 2008. Author: **Alberto Córdoba** (Universitat Jaume I, Castellón, Spain).
12. *Comparative second order characteristic estimation techniques*. September 2008. Author: **Modesto Beltrán** (Universitat Jaume I, Castellón, Spain).
13. *Doubly stochastic point processes: Theory and applications*. May 2009. Author: **Iulian Vlad** (Universitat Jaume I, Castellón, Spain).

14. *Human and climatic change impact modelling on the habitat suitability for the chimpanzee (*Pan troglodytes ellioti*). Case study: the proposed Mount Cameroon National Park.* March 2010. Author: **Francis Mwambo** (Universitat Jaume I, Castellón, Spain).
15. *Hydrologic modelling and uncertainty analysis of an ungauged watershed using MapWindow-SWAT.* March 2010. Author: **Boluwade Alaba** (Universitat Jaume I, Castellón, Spain).
16. *Spatial distribution of Malaria Indicator in Tanzania.* March 2010. Author: **Benedict Mugambi** (Universitat Jaume I, Castellón, Spain).
17. *Quantification of urban land use intensity. A case of Dhaka City of Bangladesh.* February 2011. Author: **Dipak Chandra Saha** (IFGI, University of Muenster, Germany).
18. *Stratigraphic interpretation of well-log data of the Athabasca oil sands of Alberta Canada through pattern recognition and artificial intelligence.* February 2011. Author: **Onyedika Igbokwe** (IFGI, University of Muenster, Germany).
19. *Landslide susceptibility assessment in Karanganyar regency, Indonesia. Comparison of knowledge-based and data-driven models.* February 2011. Author: **Faus Tinus Handi Feryandi** (IFGI, University of Muenster, Germany).
20. *Spatial point pattern analysis of Gorilla nest sites in the Kagwene Sanctuary, Cameroon: towards understanding the nesting behaviour of a critically endangered subspecies.* March 2011. Author: **Funwi Gabga Neba** (Universitat Jaume I, Castellón, Spain).
21. *Spatial analysis and investigation of fire events occurrences in the Valencian Community, Spain.* March 2011. Author: **Adriana Tanfara** (Universitat Jaume I, Castellón, Spain).
22. *Mapping the quality of life experience in Alfama. A case study in Lisbon, Portugal.* March 2011. Author: **Pearl May de la Cruz** (University of Lisbon, Portugal).
23. *Metodología Estadística para el análisis de datos funcionales cerebrales: Una aproximación con potenciales evocados.* June 2011. Author: **Jeimy Paola Aristizabal** (Universidad Nacional de Colombia, Bogotá).
24. *Investigating the use of dasymetric techniques for assessing employment containment in Melbourne, Australia.* February 2012. Author: **Christabel McCarthy** (IFGI, University of Muenster, Germany).
25. *Spatial and temporal analysis of recent drought years using Vegetation temperature condition Index. Case of Somali Regional State, Ethiopia.* February 2012. Author: **Elias Fekade Mekuria** (University of Lisbon, Portugal).
26. *Spatial-temporal analysis of climate elements, Vegetation characteristics and sea surface anomalies: case study in Gojam, Ethiopia.* February 2012. Author: **Yitea Seneshaw Getahun** (University of Lisbon, Portugal).
27. *Evaluation of a volunteered geographical information trust measure in the case of Open Street Map.* February 2012. Author: **Rene Theodore Anton de Groot** (IFGI, University of Muenster, Germany).
28. *Analysing and visualising areal crime data. A case study of residential burglary in San Francisco, USA.* March 2012. Author: **Susan Bumpus** (University of Lisbon, Portugal).
29. March 2012. Author: **Avit Bhowmik** (University of Lisbon, Portugal).

12. SUPERVISION OF PHD THESIS

1. *Characterization and statistical modelling of atmospheric pollutants in an industrial area .* May 2001, **Sobresaliente Cum Laude**. Author: **Carlos Alvarez** (Universitat Jaume I, Castellón, Spain).
2. *Kernel smoothing: theory and applications .* October 2001, **Sobresaliente Cum Laude**. Author: **Miguel Montenegro** (Universidad Tecnológica Metropolitana, Santiago de Chile, Chile).

3. *Statistical tools for the analysis of linguistic texts* . June 2002, **Sobresaliente Cum Laude**. Author: **Patricia Sastre** (*Universidad Nacional del Centro de la Provincia de Buenos Aires, Azul, Argentina*).
4. *Pseudolikelihood and inhomogeneity in spatial point processes* . June 2004, **Sobresaliente Cum Laude**. Author: **María de los ángeles Calduch** (*Universitat Politècnica de Valencia, Valencia, Spain*).
5. *Statistical analysis of spatial data: Computational analysis of Besag's methodology and its applications to economy* . June 2004, **Sobresaliente Cum Laude**. Author: **Miguel Albert** (*Universitat Jaume I, Castellón, Spain*).
6. *Geostatistica spazio-temporale: nuove classi di covarianza, variogramma e densità spettrali/Spatio-temporal geostatistics: new classes of covariance, variogram and spectral densities* . September 2004, **Sobresaliente Cum Laude**. Author: **Emilio Porcu** (*Università degli Studi di Milano-Bicocca, Italy*).
7. *Spectral analysis for geostatistics. Testing spatial independence and stationarity* . June 2005, **Sobresaliente Cum Laude**. Author: **Pablo Juan** (*Universitat Jaume I, Castellón, Spain*).
8. *Features detection in noisy images. An approximation by LISA functions in spatial point processes* . June 2005, **Sobresaliente Cum Laude**. Author: **Gil Lorenzo** (*Universitat Jaume I, Castellón, Spain*).
9. *Modeling the space-time covariance function. Analysis and applications* . February 2008, **Sobresaliente Cum Laude**. Author: **Francisco Martínez** (*Universitat de Valencia, Valencia, Spain*).
10. *Geostatistical analysis of functional data*. July 2009, **Sobresaliente Cum Laude**. Author: **Ramón Giraldo** (*Universitat Politècnica de Catalunya, Barcelona, Spain*).
11. *Spatio-temporal modeling of environmental processes derived from the economic activity*. May 2010, **Sobresaliente Cum Laude**. Author: **Gema Fernández-Avilés** (*Universidad de Castilla La Mancha, Toledo, Spain*).
12. *Comparative mathematical modelling of several acuífers in Castellon (Spain)*. Prevista February 2012. Author: **Arianna Arnau** (*Universitat Jaume I, Castellón, Spain*).

13. PROFESSIONAL AFFILIATIONS

- Sociedad Española de Estadística e Investigación Operativa / *Spanish Society of Statistics and Operations Research* (SEIO) since 1996.
- Bernoulli Society for Mathematical Statistics and Probability (International Statistical Institute) since 1993.
- New York Academy of Sciences since 1997.
- Elected member of ISI. Nominated by: Dave Holland, Abdel El-shaarawi, Jim Zidek, Alan Gelfand, Wenceslao González-Manteiga. January 2004.
- Fellow of Wessex Institute in Great Britain since July 2004.
- Spanish National Agency for Research Evaluation* (ANEP) since 2003.
- External Consultant de ESRI (GIS and Mapping Software) since april 2003. ESRI is located in Redlands, California, which is approximately 60 miles east of downtown Los Angeles. 380 New York Street, Redlands, CA 92373-8100.

14. REVIEWING

Annals of Applied Statistics, Biometrical Journal, Biometrics, Biometrika, Communications in Statistics, Computational Statistics and Data Analysis, Environmetrics, Journal of the American Statistical Association, Journal of Multivariate Analysis, Journal of the Royal Statistical Society B,

Pattern Recognition Letters, Scandinavian Journal of Statistics, Stochastic Environmental Research and Risk Assessment, Test.

15. GUEST EDITOR OF SPECIAL ISSUES

- Guest Editor of the special issue in *Journal of Geophysical Research* entitled “*Application of Recent Advances in Space-Time Statistics to Atmospheric Data*”, July 2003.
- Guest Editor of the special issue in *Boletín Geológico Minero* entitled “*Geoestadística y Modelos Matemáticos en Hidrogeología*”, July-September 2003.
- Guest Editor of the special issue in *Environmetrics* entitled “*Spatio-temporal stochastic modelling: environmental and health processes*”, September 2009.
- Guest Editor of the special issue in *Stochastic Environmental Research and Risk Assessment* entitled “*Spatiotemporal dynamics of natural phenomena*”, September 2009.

16. EDITOR-IN-CHIEF AND ASSOCIATE EDITOR

- *Joint Editor* of the Scientific Collection entitled *Medio Ambiente (The Environment)* edited by University Jaume I. Starting date: October 2002.
- *Associate Editor* of *The Journal of Environmental Statistics*. September 2008.
- *Associate Editor* of *Advances and Applications in Statistical Sciences (AISS)*. September 2008.
- *Associate Editor* of *Environmetrics*. January 2009.
- *Associate Editor* of *Stochastic Environmental Research and Risk Assessment (SERRA)*. January 2009.
- *Member of the Executive Committee of SEIO (Spanish Society of Statistics and Operations Research)*. February 2009.
- *Associate Editor* of *Journal of Agricultural, Biological, and Environmental Statistics (JABES)*. January 2011.
- *Editor of Section* entitled “*Extremes and Environmental Risk*” of Second Edition of *Encyclopedia of Environmetrics*, Wiley. January 2011.
- *Associate Editor* of *Journal of Spatial Statistics*. October 2011.
- *President of Board of Editors of METMA Workshops*.
- 2011 Election of *Board of Directors* of the International Environmetrics Society (TIES) in the position of **Secretary**.
- Co-director of the *Erasmus Mundus Master in Geospatial Technologies*. Funded by European Commission. Consortium formed by Spain, Portugal and Germany.