

Curriculum Vitae of M.J.(Susie) Bayarri

March, 2012

1. Personal Data

Family name, first name: Bayarri, M:J. (Susie).

Nationality: Spanish.

Place and date of birth: Valencia (Spain), 09/16/1956.

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2. Degrees

1976, B.S. in Mathematics, University of Valencia (Spain).

1978, Licenciatura in Mathematics, University of Valencia (Spain).

1979, M.S. in Mathematics, University of Valencia (Spain).

1984, Ph. D. in Mathematics, specialty on Statistics and Operations Research, University of Valencia (Spain).

3. Positions Held

Teaching Positions

Assistant Professor, Department of Statistics and Operations Research, Faculty of Mathematics, University of Valencia. October, 1978 - September, 1979.

Associate Professor, Department of Statistics and Operations Research, Faculty of Mathematics, University of Valencia. October, 1979 - August, 1986.

Titular Professor (with tenure), Department of Statistics and Operations Research, Faculty of Mathematics, University of Valencia. August, 1986 - February 1998.

Full Professor, Department of Statistics and Operations Research, Faculty of Mathematics, University of Valencia. February 1998 -

Visiting Associate Professor, Department of Statistics and Center for Statistical Decision Sciences. Purdue University, March - April, 1988.

Visiting Associate Professor. Department of Statistics. Purdue University. August - December 1994.

Visiting Professor. Departamento de Estadística e Investigación Operativa. Facultad de Matemáticas y Estadística. Universitat Politècnica de Catalunya. June - July 1997.

Honorary Positions

Adjunct Professor of Statistics. ISDS. (Duke University. Durham, NC, USA). September 2003 – August 2012

4. Research Activity and Interests

Objective Bayesian methods. Goodness-of-fit. Weighted distributions. Comparison of experiments. Foundations. Multi-Bayesian problems. Bayesian analysis of queueing systems. Bayesian methods in finite populations. Hierarchical models and meta-analysis in Pharmaceutical research. Bayesian robustness. Replications. Model criticism. Bayesian p-values. Calibration and Validation of Complex Computer Models. Objective Bayesian Model Choice. Multiple Comparisons. Asymptotic Bayes Factors and Extensions of BIC. Effective Sample Size. Risk assessments of catastrophic events combining physical and computer model data. Multiscale models. Uncertainty Quantification. Statistical Surrogate Models.

5. Honors and Prizes

Elected ASA Fellow. American Statistical Association 157th Annual Meeting. 1997 ASA Award Presentations. August 12, 1997.

Elected Ordinary Member of the International Statistical Institute. December 1997.

2006 Frank Wilcoxon Award winner (together with coauthors G. Molina and J. Berger) for the best applied paper in published in *Technometrics* in 2005.

Elected Fellow of the Institute of Mathematical Statistics (IMS). Induction ceremony for 2008 Fellows on July 14, 2008 at the IMS Annual Meeting/World Congress in Singapore.

2008 Jack Youden Prize winner (together with coauthors Berger, Paulo, Sacks, Cafeo, Cavendish, Lin, and Tu) given to the best expository paper published in *Technometrics* in 2007.

6. Published Papers (Refereed)

1. M.J. Bayarri (1981). Inferencia sobre el coeficiente de correlación de una población normal bivalente. *Trabajos de Estadística e Investigación Operativa* , **32** 18-31.
2. M.J. Bayarri and J.M. Bernardo (1985). Bayesian Model Criticism. *Proc. 4th Belgian Meeting of Statisticians*, (Florens et al., eds.), 45-59.
3. M.J. Bayarri (1985). Bayesian inference on the parameters of the beta distribution. *Statistics and Decision, Supplement issue n° 2*, 17-22.
4. M.J. Bayarri and M.H. DeGroot (1987). Bayesian analysis of selection models. *The Statistician* **36** 137-146.
5. M.J. Bayarri and M.H. DeGroot (1987). Information in selection models. *Probability and Bayesian Statistics* (R. Viertl, ed.). New York: Plenum Press, 39-51.
6. M.J. Bayarri, M.H. DeGroot and J.B. Kadane (1988). What is the likelihood function?. *Statistical Decision Theory and Related Topics IV* (S.S. Gupta and J.O. Berger, eds.), New York: Springer-Verlag , 3-27.
7. M.J. Bayarri and M.H. DeGroot (1988). A Bayesian view of weighted distributions and selection models. *Accelerated Life Testing and Expert Opinions in Reliability* (C.A. Clarotti, D.V. Lindley, eds.), Amsterdam: North-Holland, 70-82.
8. M.J. Bayarri and M.H. DeGroot (1988). Gaining weight: a Bayesian approach. *Bayesian Statistics 3* (J.M. Bernardo, M.H. DeGroot, D.V. Lindley, A.F.M. Smith, eds.). Oxford: University Press, 25-44.

9. M.J. Bayarri and M.H. DeGroot (1989). Optimal reporting of predictions. *Journal of the American Statistical Association* **84**, 214-222.
10. M.J. Bayarri, M.H. DeGroot, and P.K. Goel (1989). Truncation, information and the coefficient of variation. In *Contributions to Probability and Statistics. Essays in Honor of Ingram Olkin* (L. Gleser, M. Perlman, S.J. Press, and A. Sampson, eds.). New York: Springer Verlag (1989), 412-428.
11. M.J. Bayarri and M.H. DeGroot (1989). Comparison of experiments with weighted distributions. In *Statistical Data Analysis and Inference* (Y. Dodge, ed.). Amsterdam: Elsevier Science Publishers B.V. (North-Holland), 185-197.
12. M.J. Bayarri and M.H. DeGroot (1990). Selection models and selection mechanisms. In *Bayesian and Likelihood Methods in Statistics and Econometrics. Essays in Honor of George A. Barnard* (S. Geisser, S.J. Press, J. Hodges and A. Zellner, eds.). Amsterdam: Elsevier Science Publishers B.V. (North-Holland), 211-227.
13. M.J. Bayarri and M.H. DeGroot (1991). What Bayesians expect of each other. *Journal of the American Statistical Association* **86**, pp 924-932.
14. M.J. Bayarri and M.H. DeGroot (1992). Difficulties and ambiguities in the definition of a likelihood function. *Journal of the Italian Statistical Society* **1**, pp 1-15. A summarized version is also published in *Sviluppi metodologici nei diversi approcci all'inferenza statistica*. Bologna: Pitagora editrice (1991), pp 239-244.
15. M.J. Bayarri and M.H. DeGroot (1992). A "BAD" view of weighted distributions and selection models. *Bayesian Statistics 4* (J.M. Bernardo, J.O. Berger, A.P. Dawid, A.F.M. Smith, eds.). Oxford: Clarendon Press, pp 17-33.
16. M.J. Bayarri and M.H. DeGroot (1993). The analysis of published significant results. in *Rassegna di Metodi Statistici ed Applicazioni* (W. Racugno, ed.). Bologna: Pitagora editrice (1993), pp 19-41.
17. M.J. Bayarri and J.O. Berger (1994). Robust Bayesian bounds for outlier detection. *Recent Advances in Statistics and Probability* (J.P. Vilaplana and M.L. Puri, eds.). Amsterdam: North-Holland, pp 175-190.
18. C. Armero and M.J. Bayarri. Bayesian prediction in M/M/1 queues (1994). *Queueing Systems* **15**, pp. 401-418.
19. M.J. Bayarri and J.O. Berger (1994). Applications and limitations of robust Bayesian bounds and Type II MLE. *Statistical Decision Theory and Related Topics V* (S.S. Gupta and J.O. Berger, eds.), New York: Springer-Verlag, pp. 121-134.
20. C. Armero and M.J. Bayarri. Prior assessments for prediction in queues (1994). *The Statistician*, **43**, pp 139-153.

21. C. Armero and M.J. Bayarri (1996). Bayesian questions and answers in queues. *Bayesian Statistics 5* (J.M. Bernardo, J.O. Berger, A.P. Dawid, A.F.M. Smith, eds.). Oxford: Clarendon Press, pp 3-23
22. M.J. Bayarri and B. Font (1996). Bayesian hierarchical models for random routes in finite populations. In *Data Analysis and Information Systems* (H.-H. Bock and W. Polasek, eds.), pp 301-312.
23. C. Armero and M.J. Bayarri (1997). A Bayesian analysis of a queueing system with unlimited service. *Journal of Statistical Planning and Inference* **58**, pp 241-261.
24. M.J. Bayarri and A.M. Mayoral (1997). Diseño y análisis bayesianos de réplicas en la experimentación científica. *Qüestió* **21**, pp 59-97.
25. M.J. Bayarri and J.O. Berger (1998). Robust Bayesian analysis of selection models. *Annals of Statistics* **26**, pp. 645 – 659 .
26. M.J. Bayarri and B. Font (1999). A Bayesian Comparison of strata, cluster and random samples. *Journal of Statistical Planning and Inference*, pp 277 - 294. A previous version appeared as: A (Bayesian) note on non-random samples from finite populations. In *ASA 1994 Proceedings of the Section on Bayesian Statistical Science*. American Statistical Association. VA: Alexandria (1995), pp 246-251.
27. C. Armero and M.J. Bayarri (1999). Dealing with uncertainties in queues and networks of queues. In *Multivariate, Design and Sampling* (S. Ghosh, ed.) New York: Marcel Dekker, pp 579 - 608. (with C. Armero).
28. M.J. Bayarri and J.O. Berger (1999). Quantifying Surprise in the data and model verification. *Bayesian Statistics 6* (J.M. Bernardo, J.O. Berger, A.P. Dawid, A.F.M. Smith, eds.). Oxford: Clarendon Press, pp 53 - 83 (with discussion).
29. M.J. Bayarri and A.M. Mayoral (1999). Graphical models for hierarchical computations in the analysis and design of replications. *Revista de la Real Academia de las Ciencias Exactas, Físicas y Naturales, Special Issue on Bayesian Methods in the Sciences*, **93**, pp 281-293 (with A.M. Mayoral).
30. M.J. Bayarri and J.O. Berger (2000). P-values for composite null models. *Journal of the American Statistical Association* **95**, pp 1127-1142. Rejoinder, pp 1168-1170.
31. T. Sellke, M.J. Bayarri and J.O. Berger (2001). Calibration of p-values for Testing Precise Null Hypotheses. *The American Statistician* **55**, pp 62-71.
32. M.J. Bayarri and M.E. Castellanos (2001). A comparison between p-values for goodness-of-fit checking. In *Bayesian Methods with Applications to Science, Policy, and Official Statistics* (E.I. George, editor). Luxembourg: Office for Official Publications of the European Communities, pp.1 - 10.

33. M.J. Bayarri and J.O. Berger. P-valores, esos desconocidos (2001). Proceedings de la VIII Conferencia Española de Biometría (ISBN 84-95075-50-4. M.D. Ugarte y A.F. Militon, eds.) Universidad Pública de Navarra, pp. 27 - 34.
34. C. Armero and M.J. Bayarri (2001). Queues. In *International Encyclopedia of the Social & Behavioral Sciences* **18**, pp 12676-12680.
35. M.J. Bayarri, J.O. Berger and G. Molina (2001). Fast simulators for assessment and propagation of model uncertainty. In *Sensitivity Analysis of Model Output III* (p. Prado, ed, CIEMAT, Madrid) pp 193--201.
36. M.J. Bayarri and A.M. Mayoral (2002). Bayesian design of 'successful' Replications. *The American Statistician* **56**, pp 207--214. .
37. M.J. Bayarri and A.M. Mayoral (2002). Bayesian analysis and design for comparison of effect-sizes. *Journal of Statistical Planning and Inference*. Volume in honor of C.R. Rao. Vol. **103**, Nos. 1-2, pages 225-243 .(with A.M. Mayoral).
38. M.J. Bayarri and J. Morales (2003). Bayesian Measures of Surprise for outlier detection. *Journal of Statistical Planning and Inference* **111**, pp 3 – 22.
39. R. Hubbard and M.J. Bayarri (2003). Confusion over measures of evidence (p 's) versus errors (α 's) in classical statistical testing. *The American Statistician* **57**, pp. 171 – 182 (with discussion).
40. Bayarri, M.J. and Mayoral, A.M. (2004). Elección bayesiana del tamaño de muestra óptimo. En *Tamaño de Muestra y Precisión Estadística* (A. Martínez Almécija, Joaquín Muñoz García, A. Pascual Acosta, eds.), 85 –110. Servicio de Publicaciones de la Universidad de Almería.
41. Bayarri, M.J., and Berger, J.O. (2004). The interplay of Bayesian and Frequentist analysis. *Statistical Science*, **19**, 58-80.
42. M.J. Bayarri, James O. Berger, G. Molina, N. M. Roupail, J. Sacks (2004). Assessing Uncertainties in Traffic Simulation: A Key Component in Model Calibration and Validation. *Transportation Research Record (TRR), Journal of the Transportation Research Board* **1876**, 32—40.
43. Bayarri, M.J. and García-Donato, G. (2005). A Bayesian, sequential look at u-Control charts. *Technometrics* **47**, pp. 142-151.
44. Bayarri, M. J. and Fienberg, S. E. (2005). Morris H. DeGroot. Biographic Entry in *Encyclopedia of Statistical Sciences, 2nd Edition*, (Balakrishnan, N., Campbell, B., Kotz , S., and Vidakovic, B., Eds). Volume **3**, 1573-1575. Wiley.
45. Molina, G., Bayarri, M.J., and Berger, J.O. (2005). Statistical inverse analysis for a network microsimulator. *Technometrics* **47**, pp. 388-398.

46. Bayarri, M.J., Castellanos, M.E. and Morales, J. (2006). MCMC Methods to approximate conditional predictive distributions. *Computational Statistics & Data Analysis*, Vol **51**/2, pp 621-640.
47. M.J. Bayarri and G. García-Donato (2007). Extending conventional priors for testing general hypothesis in linear models. *Biometrika* **94**, pp 135-152.
48. M.J. Bayarri, J.O. Berger, R. Paulo, J. Sacks, J.A. Cafeo, J. Cavendish, C.H. Lin, and J. Tu (2007). A Framework for Validation of Computer Models. *Technometrics* **49**/2, pp.138—154.
49. Bayarri, M.J., Berger, J.O., Cafeo, J., Garcia-Donato, G., Liu, F., Palomo, J., Parthasarathy, R.J., Paulo, R., Sacks, J., Walsh, D (2007). Computer Model Validation with Functional Output. *Annals of Statistics* **35**/5, pp 1874—1906.
50. M. J. Bayarri, J. O. Berger and G. Molina (2008). Incorporating Uncertainties into Traffic Simulators. In *Recent Advances in Modeling and Simulation. Tools for Communication Networks and Services* (A. Netjat Ince and Arnold Bragg, eds.). . pp. 330-347. Springer.
51. M.J. Bayarri and M.E. Castellanos (2007). Bayesian Checking of the Second Level of Hierarchical Models (Discussion Paper). *Statistical Science* **22**, 3, pp. 322-342; Rejoinder pp. 363-367.
52. M. J. Bayarri, J. O. Berger and G. Datta (2008). Objective Bayes Testing of Poisson versus Inflated Poisson Models. In *Pushing the limits of Contemporary Statistics: Contributions in Honor of Jayanta K. Ghosh* (B. Clarke and S. Ghosal, eds.). IMS Collections **3**, 105--121. (DOI: 10.1214/074921708000000093).
53. F. Liu, M.J. Bayarri, J.O. Berger, R. Paulo, J. Sacks (2008). A Bayesian Analysis of the Thermal Challenge Problem. *Computer Methods in Applied Mechanics and Engineering* **197**/29-32, pp. 2457-2466 (doi: 10.1016/j.cma.2007.05.032).
54. Bayarri, M.J., and Garcia-Donato, G (2008). Generalization of Jeffreys's Divergence Based priors for Bayesian hypothesis testing. *Journal of the Royal Statistical Society Series B* (Statistical Methodology) **70**/5, pp.981-1003. Extended version in the Archive collection: arXiv:0801.4224v1 <<http://arxiv.org/abs/0801.4224v1>> [stat.ME].
55. F. Liu, M.J. Bayarri, and J.O. Berger (2009) "Modularization in Bayesian Analysis with emphasis on analysis of computer models" *Bayesian Analysis* **4**/1, pp.119–150. Posted online 2009-01-20, DOI:10.1214/09-BA404.
56. M.J. Bayarri, J.O. Berger, M.C. Kennedy, A. Kottas, R. Paulo, J. Sacks, J.A. Cafeo, C.H. Lin, and J. Tu (2009). Predicting Vehicle Crashworthiness: Validation of Computer Models for Functional and Hierarchical Data. *Journal of the American Statistical Association* **104**/487, pp 929-943.

57. M.J. Bayarri, J.O. Berger, E. Calder, K. Dalbey, S. Lunagomez, A.K. Patra, E.B. Pitman, E.T. Spiller, and R.L. Wolpert (2009). Using Statistical and Computer Models to Quantify Volcanic Hazards. *Technometrics*, **51**/4, pp 402-413.
58. M.J. Bayarri (2010). A methodological review of computer models. In *Frontiers of Statistical Decision Making and Bayesian Analysis* (Ming-Hui Chen, Dipak K. Dey, Peter Mueller, Dongchu Sun, and Keying Ye, eds.) pp 157-168, Springer.
59. Reichert, P., White, G., Bayarri, M.J., and Pitman, E.B (2011), Mechanism-based emulation of dynamic simulations models: Concept and application in hydrology. *Computational Statistics and Data Analysis* **55**, pp. 1638-1655 DOI information: 10.1016/j.csda.2010.10.011.
60. Bayarri, M.J., and Berger, J.O. (2012). Hypothesis Testing and Model Uncertainty. Oxford. In A Volume in Honor of Adrian F.M. Smith. Clarendon Press (P. Damien et al., eds.) (in Press).

7. Published Invited Discussions and Editorials

61. M.J. Bayarri (1987). Comment on testing precise hypotheses (by J. Berger and M. Delampady). *Statistical Science*, 2, n° 3, 342-344.
62. M.J. Bayarri (1988). Comment on selection models and the file-drawer problem (by S. Iyengar and J. Greenhouse). *Statistical Science*, 3, n° 1, 128-131.
63. M.J. Bayarri and M.H. DeGroot (1988). Auxiliary parameters and simple likelihood functions. In *The Likelihood Principle* (by J.O. Berger and R.L. Wolpert). Hayward, CA: Institute of Mathematical Statistics, 160.3-160.7.
64. M.J. Bayarri (1988). Discussion of to weight or not to weight - that is the question- (by T.F.M. Smith). *Bayesian Statistics 3* (J.M. Bernardo, M.H. DeGroot, D.V. Lindley, A.F.M. Smith, eds.). Oxford: University Press, 447-450.
65. M.J. Bayarri (1990). Comment on la enseñanza de la estadística en la licenciatura de matemáticas (by F.J. Girón). *Estadística Española* 32, pp 21-26.
66. M.J. Bayarri and J.O. Berger (1991). Comment on replication and meta-analysis in parapsychology (by J. Utts). *Statistical Science* 6, pp 379-382.
67. M.J. Bayarri (1994). Comments on an application of robust Bayesian analysis to a medical experiment (by J.B. Kadane). *Journal of Statistical Planning and Inference* , 40, pp. 228-231.
68. M.J. Bayarri (1994). Comments on an overview of robust Bayesian analysis (by J. Berger). *Trabajos de Estadística* 2, pp. 70-75.
69. M.J. Bayarri (1995). Discussion of The relation between theory and application in statistics (by D.R. Cox). *Trabajos de Estadística* 4, pp. 228-233.

70. M.J. Bayarri (1996). Comments on A practical, robust method for Bayesian model selection: a case study in the analysis of clinical trials (by J.Greenhouse and L. Wasserman). In *Bayesian Robustness* (J.O. Berger, B. Betro, E. Moreno, L.R. Pericchi, F. Ruggeri, G. Salinetti, L. Wasserman, eds). IMS Lecture Notes-Monograph Series . 29,,pp 59-61.
71. M.J. Bayarri (1998). Discussion of 'Bayes factors at work in a challenging class of problems'. in *Rassegna di Metodi Statistici ed Applicazioni, Special Issue* (W. Racugno, ed.). Bologna: Pitagora editrice, pp 126 - 129.
72. M.J. Bayarri (1999). Discussion of "Bayesian Model Choice: What and Why? " by Key, J.T., Pericchi, L.R., and Smith, A.F.M. In *Bayesian Statistics 6* (J.M. Bernardo, J.O. Berger, A.P. Dawid, A.F.M. Smith, eds.). Oxford: Clarendon Press, pp 357-359.
73. E. Cobo and M.J. Bayarri (2002),. A chance for Bayes (Editorial). *Medicina Clínica* 119,pp 252-253
74. M.J. Bayarri (2003) . Which 'base distribution'? In *Highly Structured Stochastic Systems* (P. Green, N. Hjort and S. Richardson, eds.). Oxford University Press.
75. M. J. Bayarri, Jim Berger, David M. Steinberg (2009). Special Issue on Computer Modeling. *Technometrics* **51**/4, pp. 353-353.
76. M.J. Bayarri (2009), Invited discussion of the paper "Testing for the Existence of Clusters" by C. Fuentes and G. Casella. *SORT* 33 (2), 149-152

8. Books

77. C. Armero, M.J. Bayarri, J. Bermudez, J.M. Bernardo, J. Ferrándiz, M. Rabena, L. Sanjuán, and M. Sendra (1980). *Problemas de Bioestadística* . Valencia : Servicio de Imprenta Universitario.
78. J. Abellán, C. Armero, M.J. Bayarri, A.M. Mayoral, M.T. Rabena, *Pràctiques d'Estadística Matemàtica*. Publicacions de la Universitat de València, Col.lecció: Educació, nº 41 (1999). ISBN 84-370-4450-2.
79. J. M. Bernardo, M. J. Bayarri, J. O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West (eds). (2003). *Bayesian Statistics 7*. Oxford: Oxford University Press.
80. J. M. Bernardo, M. J. Bayarri, J. O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West (eds). (2007). *Bayesian Statistics 8*. Oxford: Oxford University Press
81. J. M. Bernardo, M. J. Bayarri, J. O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West (eds). (2011). *Bayesian Statistics 9*.. Oxford: Oxford University Press.

9. Unpublished Manuscripts (original material; extended versions)

1. M.J. Bayarri (1979). Inferencia Bayesiana sobre el coeficiente de correlación en una población normal bivalente. Master Thesis. University of Valencia.
2. M.J. Bayarri (1983). Bayesian model discrimination. Tech. Rep. 3, Department of Biostatistics, University of Valencia.
3. M.J. Bayarri (1984). Contraste Bayesiano de Modelos Probabilísticos. Ph. D. Thesis, University of Valencia.
- M.J. Bayarri (1985). A Bayesian goodness-of-fit test. Department of Statistics. Tech. Rep Carnegie Mellon University.
4. M.J. Bayarri and J.O. Berger (1997). Measures of Surprise in Bayesian Analysis. ISDS Discussion Paper 97-46, Duke University (extended version)
5. Bayarri, M. J., Berger, J. O., Higdon, D., Kennedy, M. C., Kottas, A., Paulo, R., Sacks, J., Cafeo, J. A., Cavendish, J., Lin, C. H., and Tu, J. (2002). A Framework for Validation of Computer Models. Tech. Rep. 128, National Institute of Statistical Sciences. <http://www.niss.org/technicalreports/tr128.pdf>. (extended version)
6. M.J. Bayarri, James O. Berger, German Molina, Nagui M. Roupail, and Jerome Sacks (2003) Assessing Uncertainties in Traffic Simulation: A Key Component in Model Calibration and Validation. July 2003. NISS Technical Report. 137 (extended version)
7. R. Hubbard and M.J. Bayarri (2003). P-values are NOT error probabilities. Working Paper 03-26 ISDS, ISDS, Duke University. (An extended version of the publication above).
8. M.J. Bayarri and G. García-Donato (2005). Extending conventional priors for testing general hypothesis in linear models. Discussion Paper 2005-05, ISDS, Duke University. (An extended version of the publication above.)
9. M.J. Bayarri, J.O. Berger, R. Paulo, J. Sacks, J.A. Cafeo, J. Cavendish, C.H. Lin, and J. Tu (2005). A Framework for Validation of Computer Models. National Institute of Statistical Sciences. Tech. Rep. 162. (extended version)
10. Berger, J., Bayarri, M.J., Jang, W., Pericchi, L.R., Ray, S. (2006). Extending and Generalizing BIC. Tech. Rep. SAMSI (draft).
11. M.J. Bayarri, J. Berger, F. Liu, R. Paulo and P. Reichert. "Using computer model derivatives to improve emulators and extrapolating predictions" (in preparation)
12. Reichert, P., White, G., Bayarri, M.J., Pitman, E.B., and Santner, T.J. (2008), Mechanism-Based Emulation of Dynamic Simulators: Concept and Application in Hydrology (extended version)
13. Berger, J., Bayarri, M.J., Pericchi, L.R. (2011), The effective Sample Size (Submitted)

14. Bayarri, M.J., Berger, J.O, Forte, A. and Garcia-Donato, G (2011), Criteria for Bayesian model choice with application to variable selection (Submitted)

10. Research Grants and Projects

Automatic medical diagnosis (applications of Bayesian methodology), 1981 - 1983 (jointly with faculties of the Department of Biostatistics, U. Valencia). C.A.I.C.Y. T. Research Project n. 359.

Fulbright / MEC (Spanish Ministry of Education and Science) Postdoctoral Research Grant n. 85-07399. Center of application: Department of Statistics, Carnegie-Mellon University. (9/1/85 - 8/31/86).

Complementary statistical software to the VISILOG image analysis package, 1988 - 1991 (jointly with other faculties of the Department of Statistics and Operations Research). C.A.I.C.Y. T. Research Project n. PB87-0992 (7/28/1988)

Ministry of Education and Science (D.G.I.C.Y.T.) Research Grant n. BE91-038. Center of application: Department of Statistics, Purdue University. (2/1/91 - 7/31/91).

Universitat de Valencia grant for short stays under the Program Ajuda de la convocatòria de 1992 d'Estades en Centres d'Investigació Nacionals y Estrangers . Center of application: Department of Statistics, Purdue University.(15/8/92 al 22/9/92).

Principal Investigator of the Research Project *Spatial an Temporal Applications: A Bayesian Analysis*. 1994 - 1997 (jointly with other faculties of the Department of Statistics and Operations Research). Ministry of Education and Science (S.G.F. y P.C.) Research project n. PB96-0776.

Universitat de Valencia grant for short stays under the Program Ajuda de la convocatòria de 1996 d'Estades Curtes en Centres d'Investigació Estrangers . Center of application: Department of Statistics, Purdue University.(30/7/96 al 31/9/96).

Principal Investigator of the Research Project *Bayesian Inference on Highly Structured Stochastic Models*. 1998 - 2000 (jointly with other faculties of the University of València). Generalitat Valenciana (Local Government) Research project n. PB96-0776.

Principal Investigator of the Project *Model Selection and Model Checking from a Bayesian Point of View*. 2000 - 2003, jointly with other faculties of the University of València, Miguel Hernández University (Elche, Valencia, Spain) and the University of Cagliari (Italy). Ministry of Education and Culture of Spain, Research project n. (HI1999-0104).

Framework for Statistical Evaluation of Complex Computer Models, 2000 - 2003, (with other researchers from Duke University, Durham, NC, USA, North Carolina State University, Raleigh, NC, USA, and National Institute of Statistical Sciences, Research Triangle Park, NC,

USA). National Science Foundation (USA) under the Program "Focused Research" Groups (FRG), Research Project n. DMS-0073952.

Principal Investigator of the European Community Grant (Marie Curie), with number HPMF-CT-2000-00463 awarded to Mario Trottni, *Statistical information, confidentiality, and disclosure limitation risk*. 1/02/2001 a 31/01/2003.

Principal Investigator of the Project *Design, Implementation, Selection and Validation of Bayesian Hierarchical Models in the Pharmaceutical Research*, jointly with other faculties of the Miguel Hernández University (Elche, Valencia, Spain). Spanish Ministry of Science and Technology and European FEDER (2002-2004). Research Project nr. SAF2001-2931.

Principal Investigator of the Project *Bayesian Model Choice, Validation and Analysis of Spatial and Temporal Models in Edipemiology and the Environment*. Jointly with other faculties of the University of Valencia, Miguel Hernández University (Elche, Valencia, Spain), University of Castilla-La Mancha and University of Murcia. Spanish Ministry of Education and European FEDER (2005-2007). Research Project nr. MTM2004-03290.

Principal Investigator of the Project *Complement to MTM2004-03290 Bayesian Model Choice, Validation and Analysis of Spatial and Temporal Models in Edipemiology and the Environment*. Jointly with other faculties of the University of Valencia, Miguel Hernández University (Elche, Valencia, Spain), University of Castilla-La Mancha and University of Murcia. Funded by Generalitat Valenciana, Conselleria de Empresa, Universidad y Ciencia (2006). Research Project nr. GVACOMP2006-205.

Member of a Spanish, Nation wide, Coordinating Research Project of the Mathematical Sciences: *Ingenio Matemática* as P.I. of the Project MTM2004-03290. P.I.: Enrique Zuazua Iriondo. Funded by the Spanish Ministry of Education and Science (2006-2010). Research Project nr. CDS2006-00032.

Principal investigator of a Grant for the Forming of nets of research groups and centers. Grant ARVIV/2007/006: *Research group on spatial and temporal statistic in epidemiological and environmental sciences (GEitEma)*. Funded by Generalitat Valenciana, Conselleria de Empresa, Universidad y Ciencia, (2007).

Principal Investigator of the Project *Objective Bayesian Methods in Public Health and Environment*. Jointly with other faculties of Duke University (Durham, USA), the University of Valencia, Miguel Hernández University (Elche), University of Castilla-La Mancha (Albacete), University Rey Juan Carlos (Madrid) and University of Murcia. Funded by the Spanish Ministry of Education and Science (Oct. 2007- Dec. 2010); number MTM2007-61554.

Member of the European Project: *A European Health and Environment Information System for Risk Assessment and Disease Mapping (EUROHEIS2)*. Principal Investigator: Lars Jarup. Founded by the Executive Agency for Health Consumers (formerly Public Health Executive Agency). (December 2007- December 2010)

Principal investigator of the NSF Focused Research Group program. Title of the Project: *FRG Collaborative Research: Prediction and Risk of Extreme Events Utilizing Mathematical Computer Models of Geophysical Processes*. A three-institution proposal NISS, Duke University and University of Buffalo (July 2008 – July 2012).

Member, as Node I.P, of the Complementary Action: Formation of a Biostatistics Network. Overall I.P. Carmen Cadarso Suarez. About 144 researchers involved. Founded by the Spanish Ministry of Science and Innovation (November 2010 November 2011)

Principal Investigator of the Project Validation and Implementation of Bayesian Models for State of the Art Applications. Jointly with other faculties of Duke University (Durham, USA), University of Valencia, University of Castilla-La Mancha (Albacete), University Rey Juan Carlos (Madrid) and Center for Research on Public Health (local government of Valencia). Founded by the Spanish Ministry of Science and Innovation (January. 2011- December 2013); Grant number MTM2010-19528

11. Consulting

Design, execution and analysis of the opinion polls for the 1982 Spanish general elections and for the 1983 Community of Valencia Council election, October 1982, and May 1983 (jointly with faculties of the Department of Biostatistics). Institutional contracts between the PSOE-PV party and the University of Valencia.

Development of software for storage, processing and analysis of the Health Statistical Information of the Valencia Autonomous Community. Contract between the University of Valencia and the Local Valencia Ministry of Health and Consumption. December 1987 – November 1988. P.I.'s F. Montes Suay y J. Ferrándiz Ferragud

Design and Analysis of a survey about TV audience habits and preferences in the Community of Valencia, January - February, 1989 (jointly with other faculties of the Department of Statistics and Operations Research). Contract (1/5/1989) between RTVE and the Department of Statistics and Operations Research of the University of Valencia.

Design and Analysis of a survey about radio-audience habits and preferences in the Community of Valencia, March - June, 1989 (jointly with other faculties of the Department of Statistics and Operations Research). Contract between RTVE and the Department of Statistics and Operations Research of the University of Valencia.

Design and Analysis the health sample survey in the Community of Valencia, 1990 - 1992 (jointly with other faculties of the Department of Statistics and Operations Research of the U. Valencia). Contract between the Ministry of Health and Consumption of the Community of Valencia Local Government and the Department of Statistics and Operations Research of the U. Valencia.

Study on the Teaching and Research Structures of the Universities in the Valencia Autonomous Community June – November 1995 (jointly with other faculties of the Department of Statistics and Operations Research of the U. Valencia). Contract between the Ministry of Education of the Community of Valencia Local Government and the University of Valencia.

P.I of the *Introductory Course on Bayesian Statistics* to researchers of the Pharmaceutical Laboratory Almirall-Prodesfarma. Contract between this Lab and the University of Valencia. September 1999.

Mathematically/Statistically-Based Validation Systems, 1/11/2000 through 30/04/2004; 2005 (jointly with other faculties from Duke University, Durham, NC, USA, and the National Institute of Statistical Sciences, Research Triangle Park, NC, USA). Contract between General Motors (USA) and NISS (National Institute of Statistical Sciences, USA).

P.I of the Exchange Contract *Computing tools for spatial-temporal epidemiological surveillance* (with colleagues of the Universities of Valencia, Miguel Hernandez of Elche, Murcia, Castilla-La Mancha and Rey Juan Carlos of Madrid). Contract with the Spanish Ministry of Science and Education through the umbrella Consolider Project “Ingenio Mathematica”. October 2007—July 2008.

Difusión of the System for the Geographical Analysis of Spatial Epidemiology (AGEPIES) (IP Antonio López Quílez), Contract with la Conselleria d'Empresa, Universitat i Ciència de la Generalitat Valenciana. Importe: 2.500,00€ (1/1/2007 – 1/1/2008).

12. Invited Presentations at Statistical Meetings

1. Quatrième Rencontre Franco-Belge de statisticiens. Louvain (Belgica), November 1983. (with J.M. Bernardo).
2. Advance Research Conference on Weighted Distributions and Related Weighted Methods. University Park, PA, November 1985. (with M.H. DeGroot).
3. 32nd. NBR-NSF Seminar on Bayesian Inference in Econometrics. Columbus, Ohio, May 1986. (with M.H. DeGroot).
4. Fourth Symposium on Statistical Decision Theory and Related Topics. West Lafayette, Indiana, June 1986. (with M.H. DeGroot and J.B. Kadane).
5. IOS International Conference on Practical Bayesian Statistics. Cambridge (England), June 1986. (with M.H. DeGroot).
6. International Workshop on Bayesian Analysis: Foundations and Methodologies. Stresa (Italia), September 1986. (with M.H. DeGroot).

7. International Symposium on Probability and Bayesian Statistics. Innsbruck (Austria), September 1986. (with M.H. DeGroot).
8. XVI Reunión Nacional de Estadística, Informática e Investigación Operativa. Málaga (Spain), November 1986. (with M.H. DeGroot).
9. 199th meeting of the institute of Mathematical Statistics. Dallas, Texas, March 1987. IMS special invited paper (with M.H. DeGroot).
10. Third Valencia International Meeting on Bayesian Statistics. Altea (Spain), June 1987. (with M.H. DeGroot). Also, Invited discussant.
11. International Conference on Recent Developments in Statistics and their Applications. Seoul (Korea), August 1987. (with M.H. DeGroot).
12. Sino-American Statistical Meeting. Beijing (China), September 1987. (with M.H. DeGroot).
13. 46th Session of ISI; Satellite Meeting on Mathematical Statistics and Probability. Kyoto (Japan), September 1987. (with M.H. DeGroot).
14. Joint Statistical Meetings of the American Statistical Association and the Biometric Society (ENAR and WNAR). New Orleans, August 1988. (with M.H. DeGroot).
15. Symposium on Bayesian Decision Theory. Sherbrooke (Canada), June 1989. (with M.H. DeGroot).
16. Brazil-US Workshop on Bayesian Statistics and Econometrics. Rio de Janeiro, Brasil, July 1990. (with M.H. DeGroot).
17. Convegno della Società Italiana di Statistica: *Sviluppi Metodologici nei Diversi Approcci all'Inferenza Statistica*. Cagliari, Italy, April 1991. (with M.H. DeGroot).
18. Fourth Valencia International Meeting on Bayesian Statistics. Peñíscola, April 1991. (with M.H. DeGroot).
19. Workshop on foundational issues in statistics and decision sciences. West Lafayette, Indiana, July 1991. (with J.O. Berger).
20. Joint Statistical Meetings of the American Statistical Association and the Biometric Society (ENAR and WNAR) and the Institute of Mathematical Statistics. Atlanta, August 1991. (with M.H. DeGroot).
21. International Workshop on Bayesian Robustness. Milano, Italy, May 1992. Invited discussant.
22. Fifth Symposium on Statistical Decision Theory and Related Topics. Purdue University, West Lafayette, Indiana, June 1992. (with J.O. Berger).

23. IV International Meeting of Statistics in the Basque Country. S. Sebastian (Donosty), Spain, August 1992. (with J.O. Berger).
24. America's Workshop on Bayesian Statistics and Econometrics. Caracas, Venezuela, December 1992. (with C. Armero).
25. 1st Multinational Riverboat conference on Bayesian Econometrics and Statistics. Basel - Amsterdam, April-May 1993. Invited discussant.
26. Fifth Valencia International Meeting on Bayesian Statistics. Alicante, June 1994. (with C. Armero).
27. 38th Joint National Meeting of the Operations Research Society of America and The Institute of Management Sciences. Detroit (USA), October 1994. (with C. Armero).
28. Jahrestagung der Gesellschaft für Klassifikation. Basel, Austria, March 1995. (with B. Font):.
29. Second International Workshop on Bayesian Robustness. Rimini, Italia, May 1995. Invited discussant.
30. 3rd Workshop of the ESF (European Science Foundation) Network on Highly Structured Stochastic Systems. Luminy, Francia, June 1995. (with C. Armero).
31. VI Latin American Congress on Probability and Mathematical Statistics CLAPEM 95. Viña del Mar, Chile, November 1995 (with C. Armero).
32. Workshop on Fisheries Research in Western Mediterranean: An Interdisciplinary Approach. Alicante, May 1996.
33. ISBA 1996 North American Meeting. Chicago, USA, August 1996. (with C. Armero).
34. The First NIU Symposium on Statistical Science. DeKalb, Illinois (USA), September 1996. (with B. Font).
35. The Royal Statistical Society 1997 Conference. Nottingham (U.K.), July 1997. (with A.M. Mayoral).
36. Workshop on Model Selection. Cagliari, Italia, June 1997. Invited discussant.
37. 51st Session of the International Statistical Institute. Istanbul, Turkey, August 1997. Invited discussant.
38. Foro Nacional de Estadística. IIMAS, UNAM, Mexico DF, September 1997. (with A. M. Mayoral).
39. Sixth Valencia International Meeting on Bayesian Statistics. Alcossebre, (Alicante, Spain) June, 1998. (with J.O. Berger):

40. Sixth Valencia International Meeting on Bayesian Statistics. Alcossebre, June 1998. Invited discussant
41. Workshop on Bayesian Inference and Stochastic Processes. Madrid, June 1998. (with C. Armero)
42. 6th International Purdue Symposium on Statistics. West Lafayette (Indiana, USA), June 1998. (with J.O. Berger):
43. I Taller Mexicano de Estadística Bayesiana (Ciudad de México), September 1998.
44. Symposium in Model Selection, Empirical Bayes and related topics. Lincoln, Nebraska, March 1999. (with J.O. Berger).
45. International Workshop on Objective Bayes Methodology. Valencia, June 1999. Invited Discussant.
46. Fifth World Congress of the Bernoulli Society and 63rd Annual Meeting of the Institute of Mathematical Statistics. Guanajuato, Mexico, May 2000. (with J.O. Berger).
47. ISBA 2000. Creta (Greece) May-June 2000. (Bayarri, M.J., and Mayoral, M.A.)
48. I Jornada científica SEE - SEB Punto de encuentro: análisis geográfico de riesgos en medio ambiente. Valencia, June 2000
49. 2000 AMS-IMS-SIAM Summer Research Conference on Bayes, Frequentist and Likelihood Inference: A Synthesis. Mount Holyoke College, South Hadley, MA (USA), Julio 2000. (M.J. Bayarri, J.O. Berger and T. Sellke)
50. Third International Workshop on Objective Bayesian Methodology. Ixtapa, Mexico, September 2000. (with J. Morales):
51. Models and inference in HSSS: recent developments and perspectives. Luminy, France, 13-18 November 2000. Invited Discussant.
52. Foundation of Statistical Inference: Applications in the Medical and Social Sciences, in Industry, and the Interface with Computer Science. Shores Holiday Resort (Israel) 17 -21 December 2000 (with J.O. Berger).
53. VIII Conferencia Española de Biometría. Pamplona (Spain), 28-30 Marzo de 2001. Opening Invited Talk (with J.O. Berger).
54. Third International Symposium on Sensitivity Analysis of Model Output. Madrid (Spain), 18 - 20 June 2001 (with J.O. Berger and G. Molina).
55. Seventh Valencia International Meeting on Bayesian Statistics and 2002 ISBA International Meeting. Tenerife, June 1st - June 6th, 2002. Invited Overview Talk (with J.O. Berger).

56. International Conference on Computational and mathematical methods in Science and Engineering (CMMSE 2002) Alicante, Spain, September 20--25, 2002. (with Castellanos, and M.E. Morales, J.).
57. VV&A/Foundations 2002 Conference&Workshops. (Johns Hopkins Laboratory/Kossiakoff Center, Laurel, MD, USA) October 22-24, 2002. (with James Berger, D. Higdon, M. C. Kennedy, A. Kottas, R. Paulo, J. Sacks, J. A. Cafeo, J. Cavendish, C. H. Lin, J. Tu).
58. International Workshop on Objective Bayesian Methods. Granada, December 7-8, 2002. (with J. Berger, M.E. Castellanos).
59. IX Conferencia Española de Biometría. A Coruña, 28-30 de Mayo de 2003. Plenary Talk.
60. Fourth Internacional Workshop on Objective Prior Methodology. Aussois (France), June 15-20 2003. *Invited discussant* .
61. Seventh Purdue Internacional Symposium on Statistics and Statistical Decisión Theory Conference. West Lafayette (IN, USA), June 19-24, 2003. (with M.E. Castellanos).
62. 1st IMS-ISBA Statistical Joint Meeting. S. Juan de Puerto Rico, July 23-26, 2003. (with J.O. Berger, J. Sacks, R. B. Paulo)
63. Joint Statistical Meetings 2003. San Francisco, August 3 -- 7, 2003. (with J.O. Berger, J. Sacks)
64. 83rd Annual Meeting of the Transportation Research Board, Washington, DC, January 21-23, 2004. (with James O. Berger, G. Molina, N. M. Roupail, J. Sacks).
65. ISBA 2004 World Meeting. Viña del Mar, Valparaíso, Chile, May 23-27 2004. Invited Discussion Panel
66. Workshop on Bayesian Model Selection, Utrecht, July 7-9, 2004. Invited talk (with J.O. berger and G. Molina) and Invited discussant.
67. NPCDS/SAMSI workshop on the Design and Analysis of Computer Experiments for Complex Systems. Banff, Alberta, Canada, July 14-17, 2004.
68. The 3rd Winter Workshop on Statistics & Computer Science - Scientific Applications of Bayesian Analysis - Ein-Gedi, Dead Sea, Israel, December 5-7 2004. (with G. García-Donato).
69. International Conference on the Future of Statistics Theory, Practice and Education, Hyderabad, Andhra Pradesh, India, December 29, 2004-January 1, 2005. Invited talk *and* Invited Panelist.
70. International Workshop/Conference on Bayesian Statistics and its Applications, Varanasi, India, January 6-8, 2005. Special Invited Speaker (with G. García-Donato).
71. Second Latin American Congress on Bayesian Statistics, San José del Cabo, México, February 6-10, 2005. (with J.O. Berger and J. Sacks).

72. Fifth International Workshop on Objective Bayes Methodology O'Bayes5, Branson, Missouri, USA, June 4 – 8, 2005. Invited Tutorials.
73. Joint Statistical Meetings JSM2005, Minneapolis, Minnesota, USA, August 7-11, 2005 (with J.O. Berger).
74. Joint Statistical Meetings JSM2005, Minneapolis, Minnesota, USA, August 7-11, 2005. Invited Overview Lecture (with J.O. Berger).
75. Case Studies in Bayesian Statistics, Workshop 8. Pittsburgh, Pennsylvania, September 16-17, 2005. Organizer and Moderator of a Panel Discussion.
76. Statistische und Probabilistische Methoden der Modellwahl. Mathematisches Forschungsinstitut Oberwolfach, Germany. (with J.O. Berger).
77. Valencia/ISBA Eight World Meeting on Bayesian Statistics, Benidorm, June 1-6, 2006. Invited Tutorial (with J.O. Berger). Coordinator of Poster Session 3.
78. Joint Statistical Meetings JSM2006. Seattle, Washington, August 6-9, 2006. Roundtable Luncheon Presenter (invited).
79. Opening Workshop to the SAMSI Summer 2006 Program on Multiplicity and Reproducibility in Scientific Studies, Research Triangle Park, NC, July 10-12, 2006. (with J.O. Berger)
80. Opening Workshop to the SAMSI 2006 Program on Development, Assessment and Utilization of Complex Computer Models. Research Triangle Park, NC, September 10-14. Program Chair. Invited Panelist (and Chair) to a Panel Discussion.
81. Joint Engineering and Methodology Subprograms Workshop (2006 Program on Development, Assessment and Utilization of Complex Computer Models). Research Triangle Park, NC, October 26-27. Program Chair. Invited Discussion Session, opening talk (with J.O. Berger, F. Liu, J. Sacks).
82. International Biometric Society, Eastern North American Region, Spring Meeting with IMS and Sections of ASA. Atlanta, GA, March 11–14, 2007. (with J.O. Berger)
83. Cost Action 285 Final Symposium On Recent Advances for Modeling and Simulation Tools for Communications Networks and Services. University of Surrey, United Kingdom, 28-29 March 2007. (with J.O. Berger and G. Molina).
84. Joint SAMSI/MUCM Mid-Program Workshop (2006 Program on Development, Assessment and Utilization of Complex Computer Models). Research Triangle Park, NC (USA), April 2-3, 2007). Program Chair. Invited Talk (with R. Paulo J.O. Berger, and P. Reichert).
85. Transition Workshop to the SAMSI 2006-2007. Program on Development, Assessment and Utilization of Complex Computer Models. Research Triangle Park, NC, May 14--16, 2007. Chair of Workshop Committee. Invited talk (with J. Berger and R. Paulo).

86. The Third Erich L. Lehmann Symposium. Houston, Texas (USA) May 16 - 19, 2007
87. IMS/ASA/SPES 14th Annual Spring Research Conference (SRC) on Statistics in Industry and Technology. Ames, IA, May 21-23, 2007. Invited Plenary Session.
88. OBayes 6. Sixth Workshop on Objective Bayesian Methodology. Roma, Italia, June 8-12, 2007.
89. International Workshop on Statistical Modelling 2007. Barcelona, July 2-6, 2007 (with J.O. Berger, F. Liu, R. Paulo and J. Sacks.)
90. Joint Statistical Meetings, Salt Lake City (USA), July 29-August 2, 2007. Invited discussion of Wald Lecture II.
91. Kickoff Workshop to the SAMSI Summer 2008 Program on Meta-analysis: Synthesis and Appraisal of Multiple Sources of Empirical Evidence. Research Triangle Park, NC, June 2--6, 2008.
92. ISBA 2008: 9th World Meeting of the International Society for Bayesian Analysis, Hamilton Island, Australia, July 21-24, 2008. (M.J. Bayarri, G. Garcia-Donato).
93. Post-Conference Workshop (satellite to ISBA 2008): Calibration and Validation of Complex Computer Models: Bayesian Approaches, Bayesian Solutions. Macquarie University, Sydney, (27-28 July 2008).
94. NISS Exploration Workshop on Agent-Based Modeling. Research Triangle Park, NC, November 20-21, 2008.
95. O-Bayes09, The 2009 International Workshop on Objective Bayes Methodology. Philadelphia, USA, June 5-9, 2009. (with J.O. Berger).
96. Joint Statistical Meetings, Washington, DC, August 2-6, 2009. (with J.O. Berger).
97. Opening Workshop of the 2009-10 Program on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change. Durham, NC (USA), September 13-16, 2009. Invited discussion.
98. 2009-2010 Education and Outreach Program. SAMSI Two-Day Undergraduate Workshop, Durham, NC (USA), October 30-31, 2009.
99. Frontiers of Statistical Decision Making and Bayesian Analysis. In Honor of James O. Berger, San Antonio (Texas), March 17-20, 2010..
100. SAMSI Uncertainty Quantification Electronic Townhall Meeting (Invited in-situ participant). Durham, NC (USA), April 6, 2010.
101. PIMS Summer School on Risk Analysis Using Computer Models. Vancouver (CA), August 6-10, 2010 (with Robert Wolpert).

102. Borrowing Strength: Theory Powering Applications – A Conference in Honor of Larry Brown. Philadelphia (PA, USA), December 15-17, 2010 (with J. Berger, A. Forte, G. Garcia-Donato).
103. The 2011 Rao Prize Conference, University Park, PA (USA), May 19, 2011.
104. Paradigmi dell'Inferenza Statistica, tra teoria e metodo. Giornata in Onore di Ludovico Piccinato. Roma, Italia, May 27, 2011.
105. O-Bayes2011 - The 2011 International Workshop on Objective Bayes Methodology. ECNO, Shanghai, China, June 11-15th, 2011.
106. ACTS 2011: Workshop of the Association of Clinical and Translational Statisticians. Miami Beach (USA), July 30 – 31, 2011.
107. SAMSI 2011-12 Uncertainty Quantification Program: Methodology Opening Workshop and Tutorials. Research Triangle Park (NC, USA), September 7 – 10, 2011.

13. Colloquium Presentations

1. Department of Statistics, Carnegie Mellon University, Pittsburgh, September, 1985.
2. Center for Statistical Decision Sciences and Department of Statistics. West Lafayette, March-April, 1988.
3. Departamento de Estadística e Investigación Operativa. Universidad de Granada. May, 1988.
4. Dipartimento di Statistica, Probabilità e Statistiche Applicate. Università degli Studi di Roma "La Sapienza". October, 1990.
5. Dipartimento di Matematica., Università degli Studi di Cagliari. October, 1990.
6. Carnegie Mellon University. March, 1991.
7. University of Chicago. May, 1991.
8. Department of Statistics and Center for Statistical Decision Sciences, Purdue University. August, 1991.
9. Institute of Statistics and Decision Sciences, Duke University. September, 1991.
10. Department of Mathematics and Statistics, Bowling Green University. September, 1991.

11. Department of Statistics and Center for Statistical Decision Sciences, Purdue University. September, 1992.
12. Departamento de Matemática Aplicada y Estadística, Universidad de Murcia. March, 1993.
13. Department of Statistics and Center for Statistical Decision Sciences, Purdue University. September, 1993.
14. American Statistical Association, Madison Chapter, Special Seminar University of Wisconsin. November, 1994.
15. Purdue University. October, 1994
16. Department of Statistics and Center for Statistical Decision Sciences, Purdue University. October, 1994
17. Departamento de Estadística e Investigación Operativa. Universitat Politècnica de Catalunya. January, 1996
18. Department of Statistics and Center for Statistical Decision Sciences, Purdue University. September, 1996
19. Department of Statistics and Center for Statistical Decision Sciences, Purdue University. November, 1996.
20. Departamento de Estadística y Econometría. Universidad Carlos III. April, 1997.
21. Institute of Statistics and Decision Sciences. Duke University. October 1997, (Regular Seminar)
22. Institute of Statistics and Decision Sciences. Duke University. October, 1997, at STA395, ISDS, October 1997.
23. Department of Statistics, University of North Carolina at Chapel Hill. November, 1997
24. Institute of Statistics and Decision Sciences. Duke University. October, 1997, at STA395, ISDS, November 1998.
25. Institute of Statistics and Decision Sciences. Duke University. October, 1997, at STA395, ISDS, September 1999.
26. Department of Statistics, University of Connecticut, Storrs (USA), Noviembre de 1999.

27. Departament de Estadística e I.O., Universidad de Lisboa. Enero de 2000
28. Dipartimento d'Statistica, Probabilità e statistiche applicate. Università degli Studi di Roma "La Sapienza". Febrero de 2000
29. Departamento de Estadística e I.O., Universidad Complutense de Madrid. Marzo de 2000.
30. Dipartimento di Matematica, Università degli Studi di Cagliari, July 2000
31. Institute of Statistics and Decision Sciences. Duke University. at STA395, ISDS, October 2000.
32. Department of Statistics and O.R., Universidad Miguel Hernández de Elche. February 2001.
33. Department of Statistics and Econometric. University Carlos III. February 2001.
34. ESCET, Rey Juan Carlos University. June 2001.
35. Department of Statistics and O.R., University of Almería (Spain). May 2001.
36. Institute of Statistics and Decision Sciences. Duke University. at STA395, ISDS. October 2001.
37. Biometry Department, Almirall Prodesfarma, S.A. March 2002.
38. Departament d'Estadística, Universitat de Barcelona. May 2002.
39. Department of mathematics, Universidad Politécnica de Cartagena (Spain) June, 2002.
40. Statistics and Applied Mathematics Sciences Institute (SAMSI), Inverse Problems Program. November, 2002.
41. Institute of Statistics and Decision Sciences, Duke University (Durham, NC, USA). November, 2002.
42. Institute of Statistics and Decision Sciences. Duke University (Durham, NC, USA). January 27, 2003.
43. University of Missouri-Columbia. (Columbia, Missouri, USA). October 17, 2003
44. Iowa State University (Ames, IA, USA).. October 27, 2003-12-13
45. Institute of Statistics and Decision Sciences. Duke University (Durham, NC, USA). January 12, 2004.

46. Institute of Statistics and Decision Sciences, Duke University (Durham, NC, USA). November 22, 2004.
47. Departamento de Informática, Estadística y Telemática, Universidad Rey Juan Carlos (Madrid, Spain). December 16, 2004.
48. Institute of Statistics and Decision Sciences, Duke University (Durham, NC, USA). January 31, 2005.
49. Department of Statistics, University of California, Riverside (Riverside, CA, USA). February 11, 2005.
50. Institute of Statistics and Decision Sciences, Duke University (Durham, NC, USA). December 2, 2005.
51. Biostatistics Department, University of North Carolina at Chapel Hill (NC, USA), Oct. 11, 2006
52. Department of Statistics, University of Georgia (Athens, GA, USA), April 12, 2007
53. Center for Statistics and the Social Sciences, University of Washington (Seattle, USA), October 10, 2007.
54. Department of Applied Mathematics & Statistics, University of California at Santa Cruz (Santa Cruz, CA, USA), October 29, 2007.
55. Statistics Department, Wharton School, University of Pennsylvania (Philadelphia, PA, USA), November 28, 2007.
56. Department of Statistics and O.R., University of Valencia (Valencia, ESP), February 6, 2008.
57. 2007-2008 SAMSI Program on Risk Analysis, Extreme Events and Decision Theory. Working group Bayesian Analysis of Extremes (RTP, NC, USA), March 24, 2008.
58. Department of Statistical Science, Duke University (Durham, NC, USA), March 24, 2008.
59. Department of Statistics and O.R., Public University of Navarra, (Pamplona, ESP), May 9, 2008.
60. SAMSI, Working group of “interaction of deterministic and stochastic models”, October 6th and October 13th, 2009.
61. Statistical and Applied Mathematical Sciences Institute (SAMSI), 2010 Summer Program on Semiparametric Bayesian Inference: Applications in Pharmacokinetics and Pharmacodynamics. Model Fit and Model Comparison working group. July 20, 2010.
62. Department of Statistical Science, Duke University, November 29, 2010.

63. Statistical and Applied Mathematical Sciences Institute (SAMSI), 2010-2011 Program on Analysis of Object Data. Sampling/Modeling/Inference working group. December 7th, 2010.
64. Department of Statistics, University of Wisconsin at Madison. December 8th, 2010.
65. SAMSI Colloquium. Statistical and Applied Mathematical Sciences Institute (Research Triangle Park, NC). October 27, 2011.
66. Risk Assessments of Volcanic Hazards. Statistics Seminar, School of Industrial and Systems Engineering. Georgia Institute of Technology (Atlanta, Georgia). November 3, 2001.
67. TESS : The Effective Sample Size for Linear Models. STA 395, Department of Statistical Science, Duke University (Durham, NC). November 14th, 2011.

14. Ph.D. and Master Thesis Supervised

Análisis Bayesiano de Colas M/M (Bayesian analysis of M/M queues), by Carmen Armero (Ph.D. Thesis). University of Valencia. March, 1988 (co-directed by J.M. Bernardo).

Modelos Bayesianos en Poblaciones Finitas (Bayesian Models in Finite Populations), by Begoña Font (Master Thesis). University of Valencia. January, 1991.

La Replicación de Experimentos: Valoración del Éxito (Replication of Experiments: Valuation of success), by M^a. Asunción Martínez Mayoral. (Master Thesis), Universitat de Valencia. April, 1995.

Análisis Bayesianos de Muestras no Aleatorias en Poblaciones Finitas (Bayesian Analyses of non-random samples in finite populations), by María Begoña Font Belaire (Ph.D. Thesis). Universitat de Valencia. September, 1995.

Análisis Bayesiano de Réplicas . (Bayesian Analysis of Replications), by M^a Asunción Martínez Mayoral (Ph.D. Thesis). Universitat de Valencia. Mayo de 1998.

Medidas de sorpresa para bondad de ajuste, (measures of surprise for goodness-of-fit), by M^a Eugenia Castellanos Nueda (Master Thesis). Valencia, Julio 1999.

Control de Procesos. Alternativas empírico-Bayes y bayesianas a los métodos clásicos. (Statistical Process Control: Bayesian and Empirical Bayes alternatives to the classic methods) by Gonzalo García-Donato Layrón (Master Thesis). Valencia, Abril 2001

Diagnóstico Bayesiano de Modelos. (Bayesian Model Diagnostic) by M^a Eugenia Castellanos Nueda (Ph.D. Thesis). Universidad Miguel Hernández de Elche. February 2002.

Medidas de Sorpresa para la detección de Observaciones Anómalas. (Surprise measures for Outlier detection) by Javier Morales Socuélamos (Ph.D. Thesis). Universidad de Valencia. July 2002.

Factores Bayes y Factores Bayes Convencionales: Algunos Aspectos Relevantes. (Bayes Factors and Conventional Bayes Factors: Some relevant Features) by Gonzalo García-Donato Layrón. (Ph.D. Thesis). Universidad de Valencia. December 2003.

Factores Bayes analíticos en contrastes de hipótesis objetivos bajo normalidad. (Closed-form Bayes Factors for Objective Bayes testing under Normality) by Anabel Forte Deltell (Master Thesis). University of Valencia, July 4, 2008. Gonzalo Garcia-Donato co-advisor.

Objective Bayes Criteria for Variable Selection. (European Ph.D. Thesis) by Anabel Forte Deltell. Universitat de València, February 21, 2011 (Gonzalo García-Donato co-advisor).

15. Professional Societies and Activities

Positions

Member of the International Board of the International Society for Bayesian Analysis (ISBA). June 1994 - August 1996

Member of the Constitution Committee. International Society for Bayesian Analysis (ISBA). June 1994 - August 1996

Member of the 1996-1997 Nominating Committee of the Institute of Mathematical Statistics.

Vocal del Consejo Académico de la Sociedad de Estadística e Investigación Operativa, Sección Estadística. 1995-1998.

Vice-President of the International Society for Bayesian Analysis (ISBA). August - October 1996

President Elect of the International Society for Bayesian Analysis (ISBA). October 96 - December 97.

President of the International Society for Bayesian Analysis (ISBA). Enero - Diciembre 1998.

Vocal del Consejo Directivo de las Sociedad Española de Biometría. 1998 - 2001.

Vice-presidenta de la Sociedad Española de Biometría. 2000

Member of the 2001 Committee for the Savage Awards

Presidenta de la Sociedad Española de Biometría. 2001 – 2003

Member of the 2004-2005 Nominating Committee of the Institute of Mathematical Statistics.

Member of the 2006 DeGroot Prize Selection Committee (ISBA)

Chair of the ISBA Prize Committee. 2006-2007

Chair of the IMS Committee on Travel Awards, 2011. Member on 2008-2010.

Member of the 2010-2011 IMS Committee on Nominations

Member of the 2011 ISBA Nominating Committee

Membership

Sociedad Española de Estadística e Investigación Operativa (1979 -).
American Statistical Association (1980 -).
Bernoulli Society for Mathematical Statistics and Probability (1981 -).
Institute of Mathematical Statistics (1986 -).
International Society for Bayesian Analysis (1992 -)
Sociedad Española de Biometría / International Biometric Society (1997 -)

16.-Editorial

Corresponding Editor. The Institute of Mathematical Statistics Bulletin. (1990 - 2000).
Associate Editor. TEST (Trabajos de Estadística) (1994 - 1997)
Associate Editor JSPI (Journal of Statistical Planning and Inference) (1994 - 2000)
Associated Editor de los Proceedings of the Sixth Valencia International Meeting on Bayesian Statistics.
Associate Editor of the JSPI Special Volume in honor of C.R. Rao. 1999
Associate Editor of ISBA 2000, Proceedings of the Sixth World Meeting of ISBA. 2000 - 2001.
Coordinating Editor of Journal of Statistical Planning and Inference 2001-2003; 2004-2007; 2008-2011.
Co-Editor de los Proceedings of the Seventh Valencia International Meeting on Bayesian Statistics. 2002 - 2003
Associate Editor of REVSTAT (Statistical Review). (2002 -)
Member of the Editorial Advisory Committee of SORT (Statistics and Operations Research Transactions). (2003 -)
Advisory Board member for Bayesian Analysis – The Journal (2004 - 2007)
Associate Editor AOAS (Annals of Applied Statistics). (2008 -)
Associate Editor of the SIAM/ASA Journal on Uncertainty Quantification (JUQ) (2012-)

17.-Meeting Organization

Local Organizer. Second Meeting of the International Society for Bayesian Analysis. Alicante, Spain, June 1994.
President of the Scientific Committee. XXXIII Reunión Nacional de Estadística e Investigación Operativa. Valencia, Spain, March 1997.

- Organising Committee del Workshop on Bayesian Inference and Stochastic Processes, Madrid, Junio 1998.
- Scientific Committee XXXV Congreso Nacional de Estadística e Investigación Operativa, SEIO 25. Vigo, Abril 2000
- Scientific Committee of the Third International Workshop on Objective Bayesian Methodology. Ixtapa, Mexico, Septiembre de 2000.
- Comité de Honor. VIII Conferencia Española de Biometría. Pamplona, 28-30 March 2001.
- Scientific Committee of the Second Workshop on Bayesian Inference in Stochastic Processes. Varenna, Italia, May-June 2001
- Scientific Committee of Valencia 7. Tenerife, Spain, June 2002
- Scientific Committee of CMMS" 2002. Alicante, Spain, September 2002.
- Program Chair of the 1st IMS-ISBA Statistical Joint Meeting. S. Juan de Puerto Rico, July 23-26, 2003.
- Member of the Scientific Committee of the II Jornada Científica de las Sociedades Españolas de Epidemiología y Biometría. "In Memoriam Juan Ferrándiz". Valencia, June 18, 2004.
- Member of the Scientific Committee of the Fifth International Workshop on Objective Bayes Methodology. Branson, Missouri, USA, June 5-8, 2005.
- Member of the Program Committee of Valencia 8. Valencia, Spain, June 2006
- Member of the Scientific Committee of Gudo 3, III Jornadas Científicas de las Sociedades Españolas de Epidemiología y Biometría. Valencia, June 22-23, 2006.
- Member of the Scientific Committee of the Fifth International Workshop on Objective Bayes Methodology. Branson, Missouri, USA, June 5-8, 2005.
- Member of the Program Committee of Valencia 8. Valencia, Spain, June 2006
- Member of the Scientific Committee of Gudo 3, III Jornadas Científicas de las Sociedades Españolas de Epidemiología y Biometría. Valencia, June 22-23, 2006.
- Program Committee, Joint SAMSI-NPCDS Summer School on the Design and Analysis of Computer Experiments, IRMACS, Simon Fraser University (Vancouver, Canada) August 11-16, 2006.
- Chair of the Program Comité of the Opening Workshop to the SAMSI 2006 Program on Development, Assessment and Utilization of Complex Computer Models.. Research Triangle Park, NC, September 10-14., 2006
- Co-chair of the Program Comité of the Joint Engineering and Methodology Subprograms Workshop (2006 Program on Development, Assessment and Utilization of Complex Computer Models).. Research Triangle Park, NC, October 26-27, 2006.
- Workshop Committee, Chair, Joint SAMSI/MUCM Mid-Program Workshop. (2006-07 Program on Development, Assessment and Utilization of Complex Computer Models). Research Triangle Park, NC, April 2-3, 2007.
- Scientific Committee of OBayes 6, The Sixth Workshop on Objective Bayes Methodology. Roma, Italia, June 8-12th, 2007

- Scientific Committee of BISP 5, Fifth Workshop on Bayesian Inference in Stochastic Processes. Valencia (Spain), June 14-16, 2007
- Joint Statistical Meetings. Organizer (and Chair) of Session 271: *Using Computer Models for Ecological, Environmental, and Biological Applications: A SAMSI Program*. Salt Lake City (USA), July 29-August 2, 2007
- Scientific Committee of Gudo 4, IV Jornadas Científicas de las Sociedades Españolas de Epidemiología y Biometría. Valencia, June 16-20, 2008.
- Member of the Program Committee of the NISS-SAMSI workshop on “Adaptive Design in Sequential Monte Carlo and Computer Modeling”, April 15-17, 2009.
- Scientific Committee of OBayes 7, The Seventh Workshop on Objective Bayes Methodology. Philadelphia, USA, June, 2009.
- Member of the Program Committee of Valencia 9, the Ninth Valencia International Meeting on Bayesian Statistics and 2010 World Meeting of the International Society for Bayesian Analysis Benidorm (Alicante, Spain), June 3-8, 2010.
- Scientific and Organizing Committee of First Workshop on Spatio-Temporal Disease Mapping. Valencia, June 15-16, 2009.
- Member of the Scientific Programme Committee of the First International Conference on "Uncertainty in Computer Models 2010". Sheffield (United Kingdom), July 12-14th, 2010.
- Organizer (by invitation) of the Invited session on Complex Computer Modeling. IMS 2010: 73rd Annual Meeting of the Institute of Mathematical Statistics. Gothenburg (Sweden), August 9-13 2010.
- Member of the Scientific Committee of Probabilistic Analysis of Volcanic Hazards: Current Methodologies and Vision for Future Efforts. A Workshop at the University at Buffalo, May 16-19, 2011.
- Scientific Committee of OBayes-11, The 2011 International Workshop on Objective Bayes Methodology. Shanghai, China, June 11-15, 2011.
- Chair of the Scientific Committee of IWSM2011: 26th International Workshop on Statistical Modelling. Valencia, Spain, July 11-15, 2011.
- Organizing committee of the first SIAM-ASA conference on Uncertainty Quantification (UQ). Raleigh-Durham (North Carolina, USA) April 2-5, 2012.

18. Teaching Activity

Undergraduate Courses in Mathematics (University of València):

- Introduction to Probability (part of a team of two who developed it; taught for 6 semesters)
- Introduction to Statistics (part of a team of two who developed it; taught for 7 semesters).
- Mathematical Statistics (part of a team of 3 who developed it; taught for 3 semesters).
- Computer and Methodological Practices in Mathematical Statistics (part of a team of 9 who developed it and produced all support, printed material; taught for 6 semesters).

Undergraduate Courses in the Biological Sciences Degree (University of València):

Elementary mathematics (taught for 1 semester).

Elementary Statistics (taught for 2 semesters).

Biostatistics (developed the course; taught for 8 semesters).

Computer Practices for Biostatistics (part of a team of 3 who developed it; taught for 2 semesters).

Design and Analysis of Experiments (Developed material; taught for 10 semesters)

Computer Practices for Design and Analysis of Experiments (Developed material; taught for 9 semesters).

Undergraduate Courses in Medicine (University of València):

Biostatistics in Medicine (taught for 8 semesters).

Computer Practices for Biostatistics in Medicine (taught for 8 semesters).

Graduate Courses in Mathematics (University of València):

Bayesian Statistical Inference (developed the course; taught for 7 courses)

Bayesian Decision Theory (developed the course; taught for 7 courses)

Classical Decision Theory (developed the course; taught for 7 courses)

Sequential Decision (developed the course; taught for 2 semesters)

Bayesian Linear Models (developed the course; taught for 3 semesters)

Bayesian methods (developed the course, taught for 11 semesters)

Highly Structured Stochastic Models (developed the course, taught for 2 semesters)

Bayesian Model Choice and Validation (developed the course, taught for 4 semesters)

Monte Carlo Methods (taught for 1 semester)

Bayesian Statistics. Master on Biostatistics (taught for 2 semester)

Graduate Courses in other Programs (University of València):

Statistical Methods in Medicine. (Part of a team of 6 who developed the course. Taught for 2 semesters)

Biostatistics with the BMDP and SPSS (Biology and Medicine. Part of a team of 6 who developed the course. Taught for 3 semesters)

Probability and Statistics. Part of a Master Degree in the Teaching of Mathematics. (Developed the course. Taught for 2 semesters)

Design and Analysis of Experiments (Biology. Taught for 4 semesters)

Courses in other Universities

Statistics 503: Statistical Methods for Biology. Purdue University. (1 semester)

Bayesian Decision Theory and methods. Part of Master Degree in Statistics and Operations Research. University of Leon (Nicaragua). (Developed the course. Taught for 1 semester)

Graduate Course "Bayesian Inference", Part of the Ph.D. Program in Statistics and Operations Research. Universitat Politècnica de Catalunya. Barcelona (Spain). Taught under the qualification of "Quality Graduate Course". (Developed the course. 20 credits).

Other Courses

Statistical Data Analysis with SPSS. Conselleria de Sanitat, Generalitat Valenciana. (Local Government). Part of a team of 5 who developed the course. Taught for 1 semester.

- Introduction to Statistics. Coordinadora de Matemáticas de C.O.U. y Servei de Formació Permanent de la Universitat de Valencia. March - April, 1992. (part of a team of 5 who developed the Program. Taught for 2 semesters)
- Curso Práctico de Bioestadística para médicos de atención primaria. (Practical Course on Biostatistics for primary attention physicians). Contract between Universitat de Valencia and Du Pont Pharma. May - June, 1993. (Part of a team of 5 who developed the course, taught for 1 semester)
- Curso de "Introducción al Análisis Bayesiano" (Introduction to Bayesian Analysis) (8 hours). To researchers of the pharmaceutical laboratory Almirall-Prodesfarma, under a contract with this company. Barcelona, September 1999.

19. Other Academic-Related Activities

- Member of the Faculty of Mathematics Economic Committee (1987 -)
- Directress of the Research Line Métodos Bayesianos of the Department of Statistics and O.R. (University of valència) (1987 - 2006)
- Elected member of the Faculty of Mathematics Senate (1989 - 1993; 1993 - 1995)
- Chair of Graduate Program, Department of Statistics and O.R., University of Valencia (1993-2001)
- Coordinator of the Socrates - Erasmus Program of the Licenciatura de Ciencias y Técnicas Estadísticas, Universidad de Valencia. (2000 - 2001)
- University of Valencia Coordinator of Exchange Programs for the Titulación de Ciencias y Técnicas Estadísticas (2002 - 2006)