

Luis Raúl Pericchi

CURRICULUM VITÆ

Address

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Citizenship: Venezuelan. Birth date: March 11, 1952. Married, one daughter.

Education

B.A. Universidad Simón Bolívar (Licenciado en Matemáticas) 1975

M.A. University of California, Berkeley (Statistics) 1978

Ph.D. University of London, Imperial College, Department of Mathematics (Mathematical Statistics) 1981. Tutor Professor A.C. Atkinson, External Professor A.F.M. Smith. "The assessment of prior distributions for competing linear models and transformations".

Ph.D. Thesis.

Professional Experience

Professor Department of Mathematics and Computer Science, University of Puerto Rico, Rio Piedras. School of Natural Sciences. August 2001-Present.

Assistant, Associate and Professor Dept. de Matemáticas, Dept. Cómputo Científico y Estadística 1993-2001, Universidad Simón Bolívar. Early Retirement: since November, 2000.

Associate Professor Departamento de Matemáticas 1988-1993 Universidad Simón Bolívar

Assistant Professor Departamento de Matemáticas 1981-1988 Universidad Simón Bolívar

Founder and Director of the Statistical Lab. USB 1984 - 1985 and 1986 - 1992

Vice-Director Centro de Estadística y Software Matemático.(CESMa-USB) 1992-2000

Founder Coordinator of the Graduate Studies in Statistics at USB, 1997-2000.

Visiting and Temporary Positions

Assistant Professor (**Lecturer**), Universidad de Sao Paulo, Brasil, Aug.-Dec. 1985
Temporary Lecturer (**Lecturer**), Imperial College, London Jan.- Dec. 1986
Science and Engineering Research Council Fellow University of Nottingham, U.K. June - Sept. 1988
Science and Engineering Research Council Fellow University of Liverpool, U.K. Jan.- April 1989
Science and Engineering Research Council Fellow University of Liverpool, U.K. Jan. 1991
Associate Professor (**Lecturer**), Purdue University, July 1991-Jan. 1992
Visiting Professor University of Western Australia Jan-Feb. 1993
Science and Engineering Research Council Fellow, University of Liverpool and Imperial College, July-Sept. 1993
Visiting Professor (**Lecturer**), Departamento de Estadística y Econometría, Universidad Carlos III de Madrid, Oct. 1993-Feb. 1994.
Visiting Professor, Univ. Autónoma de Madrid, April-June 1997
Visiting Professor, Institute of Statistical Decision Sciences, Duke University, September 2000- June 2001.
Engineering and Physical Sciences Research Council Fellow, University of Bristol, England, June-September 2001, and June 2002.

Editorial Activities

Associate Editor, International Statistical Review 1988 - 1991
Associate Editor, Revista Brasileira de Probabilidade e Estatística 1987 - present
Member of the Editorial Board, Estadística Española 1989 - present
Associate Editor, Trabajos de Estadística (TEST) 1990 - 1997
Field Editor, Acta Científica Venezolana 1990 - 1998
Editorial Board, Latin American Chapter, Bernoulli Society-1995-present
Associate Editor, Estadística-1997-present

Awards and Distinctions

- National Prize in Hydrology (Venezuela) for the book # 1 in the list of publications, 1974.
- Prize to the best article (Publication # 5) of the year (1987). Area of Engineering. Venezuelan Council for Scientific and Technological Research.
- Elected Ordinary Member of the International Statistical Institute, 1989.

- Annual prize 1991 in the area of Mathematics, for the Publication # 25. Granada Academy of Sciences, Spain.
- Classified Researcher Level II (maximum level is III) in 1990 (renewed in 1993, 1996 and 1999) by the Venezuelan System for the promotion of research.
- Prize to the best article (Publication # 18) of the year (1992). Area of Mathematics. Venezuelan Council for Scientific and Technological Research.
- Named "External Full Professor" of the International Institute of Advanced Studies, Caracas, Venezuela, in 1992.
- Named External Professor of the Ph.D. in Statistics of the *Pontificia Universidad Católica de Chile*, 1996.
- Jose Francisco Torrealba Award (1997), to the best research record of the Universidad Simon Bolivar.
- President of the Latin American Chapter of the Bernoulli Society for Probability and Mathematical Statistics. (1997-2000).
- Guggenheim Fellowship (Jul.1997-Jun.1998) "Bayes Factors for Model Selection and Prediction".
- Program Secretary of the International Society for Bayesian Analysis (ISBA), 2002.

Graduate Students Tutored

Rafael Seoane, Magister Hydraulic Resources (honors), USB, 1984.
 María Egleé Pérez, Magister in Mathematics, (honors), USB, 1987.
 Neidha Nadal, Magister in Mathematics, (honors), USB, 1992.
 Bruno Sansó, Ph.D. in Mathematics, Univ. Central de Venezuela, 1992.
 María Egleé Pérez, Ph.D. in Mathematics, Univ. Central de Venezuela, 1994.
 José Miguel Pérez, Magister in Mathematics, (honors), USB, 1994.
 José Félix Aponte, Magister in Mathematics, USB, 1998.
 María del Cristo Pérez, Diploma in Computational Statistics, 1999.
 Neidha Nadal, Ph.D in Mathematics, (honors), USB, 2000.
 Evaristo Diz, Diploma in Computational Statistics, USB, 2000.
 Abel Rodríguez, (Honors) Magister in Statistics, USB, 2000.
 Kahela Bastidas, Diploma in Computational Statistics, USB, 2000.

Publications

1. Córdova J.R., Pericchi L.R. and Silvestre H. (1974) Optimización de la Altura de la Presa y Area de Desarrollo. Publicaciones del Ministerio de Obras Públicas, Venezuela.
2. Pericchi L.R. (1981) A Bayesian approach to transformations to Normality. **Biometrika** 68(1), p. 35-43.
3. Pericchi L.R. and Rodriguez-Iturbe I. (1983) On some problems in Bayesian model choice in hydrology. **The Statistician** 32, p. 273-278.
4. Pericchi L.R. (1984) An alternative to the standard Bayesian procedure for discrimination between normal linear models. **Biometrika** 71(3), p. 575-586.
5. Pericchi L.R. and Rodriguez-Iturbe I. (1985) On the statistical analysis of floods, in "A Celebration of Statistics." (1985). Eds. A.C. Atkinson and S. Fienberg, Chapter 23, p. 511-541. **Springer-Verlag**.
6. Seoane R. and Pericchi L.R.(1986) Some new statistical methods for model choice and parameter estimation in statistical hydrology. Actas del sexto Symposium Brasileiro de Probalidade e Estatistica. (Invited Conference).
7. Achcar J.A., Bolfarine H. and Pericchi L.R. (1987) Transformations of survival data to an extreme value distribution. **The Statistician** 36, p. 229-234.
8. Pericchi L.R. and Nazaret W. (1988) On being imprecise at the higher levels of a hierarchical linear model (invited discussion by Dr. A. Skene, University of Nottingham, U.K.). *Bayesian Statistics 3*, p. 361-375. Bernardo, J.M., De Groot M., Lindley D., Smith A.F.M. Editors. **Oxford University Press**. (Invited Conference).
9. Pérez-Shael I., Pericchi L.R. et al.(1989) Statistical analysis of a Rhesus Rotavirus vaccine trial to assess protective effect against diarrhea in Venezuelan children of 2-4 months of age. **Interciencia**, 14(4), p. 199-202.
10. Pericchi L.R. (1989) Sobre la inferencia y teoría de decisión subjetivista-Bayesiana bajo probabilidades a priori imprecisas. **Acta Científica Venezolana** 40, p. 5-18.
11. Pericchi L.R. (1989) TEORIA ESTADISTICA DE DECISION Y ANALISIS BAYESIANO. Publications of the Instituto Venezolano de Investigaciones Científicas (IVIC), ISBN 980-261-007-0, 145 pgs. (Invited Graduate Course, given in the Second National School of Mathematics, Venezuela (1989) 1st ed., in the Fourth Latin American Congress of Probability and Statistics, México (1990) 2nd ed.), and "Avances Recientes en Estadística Bayesiana y Econometría", Caracas, (1992, 3rd ed.).

12. Achcar J.A., Bolfarine H. and Pericchi L.R.(1989) Some applications of Bayesian methods in analysis of life data. *Revista Brasileira de Probabilidade e Estatística REBRAPE* 3, p. 125-148.
13. Pereira C.A.B. and Pericchi L.R. (1990) Analysis of Diagnosability. **Journal of the Royal Statistical Society Series C, Applied Statistics** 39(2), p. 189-204.
14. Walley P. and Pericchi L.R. (1990) One sided hypothesis testing with near-ignorant priors. *Revista Brasileira de Probabilidade e Estatística REBRAPE* 4, p. 69-82
15. Moreno E. and Pericchi L.R. (1990) Sensitivity of the Bayesian analysis to the prior: structural contaminations with specified quantiles of parametric families. *Actas III Congreso Latinoamericano de Prob. y Estad. Mat., Publicaciones de la Soc. Bernoulli Latinoamericana*, p. 143-158.
16. Atkinson A.C., Smith R.L. and Pericchi L.R. (1991) Grouped likelihood for the shifted power transformation. **Journal of the Royal Statistical Society Series B (methodological)**, 53(2), p. 473-482.
17. Espinosa R.A., Pericchi L.R. et al. (1991) Prognostic indicators of chronic Chagasic cardiopathy. (1991). **International Journal of Cardiology** 30, p. 195-202.
18. Pericchi L.R. and Walley P. (1991) Robust Bayesian credible intervals and prior ignorance. **International Statistical Review** 59(1), p. 1-23.
19. Moreno E. and Pericchi L.R. (1991) Robust Bayesian analysis for epsilon-contaminations with shape and quantile constraints. *Proc. Fifth Intern. Symp. App. Stoch. Model and Data Anal.*, p. 454-470, **World Scientific Pub.**
20. Pérez M.E. and Pericchi L.R. (1992) A Bayesian Approach to Analysis of Multistage Survey. *Actas IV Congreso Latinoamericano de Prob. y Estad. Mat., Publicaciones de la Soc. Bernoulli Latinoamericana* , p. 189-207.
21. Sansó B.and Pericchi L.R. (1992) Imprecise Bayesian Inference for Location Models. *Actas IV Congreso Latinoamericano de Prob. y Estad. Mat., Publicaciones de la Soc. Bernoulli Latinoamericana* , p. 221-227.
22. Moreno E. and Pericchi L.R. (1992) Análisis empírico Bayes en bandas de medidas de probabilidad. *Actas IV Congreso Latinoamericano de Prob. y Estad. Mat., Publicaciones de la Soc. Bernoulli Latinoamericana* , p. 154-171.
23. Moreno E. and Pericchi L.R. (1992) Bands of Probability Measures. A Robust Bayesian Analysis. *Bayesian Statistics 4*, Berger, J., Bernardo, J.M., Dawid, P.and Smith, A.F.M. Editors. **Oxford University Press**, p. 707 - 713.

24. Pérez M.E. and Pericchi L.R. (1992) Analysis of Multistage Survey as a Bayesian Hierarchical Model. *Bayesian Statistics 4*, Berger, J., Bernardo, J.M., Dawid, P. and Smith, A.F.M. Editors. **Oxford University Press**, p. 723 - 730.
25. Moreno E. and Pericchi L.R. (1992) Subjetivismo sin Dogmatismo: Inferencia Bayesiana Robusta. (with discussion). *Estadística Española* , 34 (129), p. 1-60.
26. Pericchi L.R. and Smith A.F.M. (1992) Exact and Approximate Posterior Moments for a Normal Location Parameter. **J. Roy. Statist. Soc. Series B (methodological)**, 54 (3), p. 793 - 804.
27. Sansó B. and Pericchi L.R. (1992) Near Ignorance Classes of Log-Concave priors for the Location Model. **Test**, 1(1), p. 27-32.
28. Campos A. and Pericchi L.R. (1992) Statistical Assessment of Total Heat Losses from Externally Finned Tubes using various Spatially-Weighted Mean Biot Numbers. **International Journal of Heat and Fluid Flow**. Vol. 13, N 4, p. 399-407.
29. Pericchi L.R., Sansó B. and Smith A.F.M. (1993) Posterior Cumulant relationships in Bayesian inference involving the Exponential Family. **Journal of the American Statistical Association** Vol. 88 , pp. 1419-1426.
30. Moreno E. and Pericchi L.R. (1993) A Hierarchical Epsilon - Contaminated Model. **Journal of Statistical Planning and Inference**, 37, p. 159-167.
31. Moreno E. and Pericchi L.R. (1993) On Epsilon - Contaminated Priors with Quantile and Piece-Wise Unimodality Constraints. **Communications in Statistics. Theory and Methods**, 22(7), pp. 1963-1978.
32. Moreno E. and Pericchi L.R. (1993) Prior Assessment for Bands of Probability measures: Empirical Bayes Analysis. **TEST**, 2, p.101-110.
33. Pericchi L.R. and Nadal N. (1993) Analysis of Irregular Likelihoods by Grouping the Likelihood and Bayesian Marginalization. *Proceedings of the Conference on Statistical Inference and Biostatistics*, Sprott D. Editor, p. 201-213.
34. Pericchi L.R. and Pérez M.E. (1994) Bayesian Robustness with more than one Sampling Model (with discussion). **Journal of Statistical Planning and Inference**, Vol. 40, 2-3, p. 279-294.
35. Sansó B. and Pericchi L.R. (1994) Large Classes of Proper Priors for Linear Models. **Communications in Statistics, Theory and Methods**. Vol. 23 (9), p. 2493-2501.

36. Sansó B. and Pericchi L.R. (1994) On Near Ignorance Classes. **REBRAPE**, 2, p.119-126.
37. Pérez M.E. and Pericchi L.R. (1994) A case study on the Bayesian Analysis of 2x2 tables with two fixed margins. **REBRAPE** , 1, p. 27-37.
38. Pericchi L.R. (1994) El Efecto PPI en Venezuela: 1990-1994. *Acta Científica Venezolana*, 45, p. 264-267.
39. Pericchi, L.R. (1994) Invited discussion of "An overview of robust Bayesian analysis" by J.O. Berger. **Test** 3, pp. 67-69.
40. Pericchi L.R. and Sansó B. (1995) A note on Bounded Influence in Bayesian Analysis. **Biometrika**, 82, 1, p.223-5.
41. Pericchi, L.R.(1995) Invited Discussion of "The relation between theory and application in statistics" by Sir David R. Cox, **Test**, 4, pp. 245-248.
42. Berger J.O. and Pericchi L.R. (1996) The Intrinsic Bayes Factor for Model Selection and Prediction. **Journal of the American Statistical Association**, 91, 433, p. 109-122.
43. Berger J.O. and Pericchi L.R. (1996) The Intrinsic Bayes Factor for Linear Models (invited discussant: Prof. D. Dey, University of Connecticut, USA). *Bayesian Statistics 5*, Bernardo J.M. et al editors. **Oxford University Press**. Invited conference. p. 25-44.
44. Berger J.O. and Pericchi L.R. (1996) On the Justification of Default and Intrinsic Bayes Factor. In *Modeling and Prediction Honoring S. Geisser*,p 276-293. Editors Lee J.C., Johnson W.O. y Zellner A. **Springer Verlag**, NY.
45. Pericchi L.R. (1996) Beyond the effect PPI in the scientific research in Venezuela. **INTERCIENCIA**. Vol. 21, p.94-97.
46. Sansó B., Pericchi L.R. and Moreno E. (1996) On the Robustness of the Intrinsic Bayes Factor for Nested Models. **Lecture Notes of the Institute of Mathematical Statistics**, *Bayesian Robustness*, p. 155-174.
47. Dominguez-Bello M.G., Pérez M.E. and Pericchi L.R.(et.al) (1997) "Modification of the Christiansen urease test for Detection of Helicobacter Pylori", **Diagnostic Microbiology and Infections Disease**. Vol. 28, pp. 235-244.
48. Nadal N. and Pericchi L.R. (1998) "An automatic Bayesian procedure for likelihoods with shifted origin". **The Statistician** , 47 Part 2, pp. 323-332.

49. Key J. T., Pericchi L.R. and Smith A.F.M. (1998) "Bayesian Model Choice: What and Why?" *Bayesian Statistics 6*, invited conference. Bernardo et al editors. **Oxford University Press**, p. 343-370.
50. Berger J.O. and Pericchi L.R. (1998) "Accurate and Stable Bayesian Model Selection: The Median Intrinsic Bayes Factor". **Sankhyā: The Indian Journal of Statistics Special Issue on Bayesian Analysis**. Vol.60, Serie B, Part.1, p.1-18.
51. Berger J.O. Pericchi L.R. and Varshavsky J.A (1998) "Bayes Factors and Marginal Distributions in Invariant Situations". **Sankhyā: The Indian Journal of Statistics. Special Issue on Bayesian Analysis**. Vol 60, Series A, part.3 , p.307-321.
52. Moreno E., Pericchi L.R. and Kadane J. (1998) " A Robust Bayesian look at the theory of Precise Measurement", in the book: *Decision Research from Bayesian Approaches to Normative Systems*. Editors: Shantan J. et al. **Kluwer Academic Publishers**.
53. Berger J.O and Pericchi L.R. (1998) " On Criticisms and Comparisons of default Bayes Factors for Model Selection and Hypothesis Testing". Special Issue of: **Rasegna di Metodi Statici ed Applicazioni**. p. 1-50.
54. Marini E., Sanna E., Paoli G., Pericchi L.R., Taglioli L. and Floris G. (2000) "Digital dermatoglyphic patterns of the Piaroa and genetic relationships among several South American Indian populations", in *The State of Dermatoglyphics*, Durham, N.M. et al editors **Melles Press**, New York. p. 3-15
55. Perez M.E., Glass R., Alvarez G., Pericchi L.R., Gonzalez R., Kapikian A., and Perez-Schael, I.,(2001) "Rhesus Rotavirus-based quadrivalent vaccine is efficacious despite age, socioeconomic conditions and seasonality in Venezuela", **Vaccine**, Vol.19, No. 7-8, p. 976-981.
56. Pacheco N., Mago V., Gómez I., Gueneau P., Guelrud., Reyes N., Pericchi L.R. and Domínguez-Bello M.G. (2001) "Comparison of PCR and common clinical tests for the diagnosis of H. pylori in Dyspeptic patients" **Diagnostic Microbiology and Infectious Disease**, 39, p. 207-10.
57. Berger J.O. and Pericchi L.R. (2001) "Objective Bayesian Model Selection. Introduction and Comparisons", in **Lectures Notes of the Institute of Mathematical Statistics**. "Model Selection", editor: P. Lahiri, pp. 135-207.
58. Rodríguez A. and Pericchi L.R. (2001) "Intrinsic Bayes Factors for Dynamic Models". *Proceedings of the ISBA2000*, VI World Meeting of the International Society for Bayesian Analysis, Crete, Greece, June 2000, E. George and P. Nanopoulos eds., **Official Publications of the European Communities, Luxembourg**, pp.459-468.

59. Kadane J., Moreno E., Pérez M.E. and Pericchi L.R. (2002) "Applying Non-Parametric Robust Bayesian Analysis to Non-Opinionated Judicial Neutrality", **Journal of Statistical Planning and Inference**, 102, p. 425-39.
60. Pericchi L.R. (2002) "Bayes Factors". *Encyclopedia of Envirometrics*. Editors: El-Shaarawi A. and Piegorsh W. **John Wiley and Sons**. Vol.1, pp. 148-150
61. Dominguez-Bello M.G. Beker B. Guelrud M. Vivas J. Peraza S. Perez M.E. and Pericchi L.R. (2002) "Socioeconomic and Seasonal variations of *H. Pylory* infection in patients in Venezuela". **American Journal of Tropical Medicine and Hygiene**, Vol. 66, pp. 49-51.
62. Pericchi L. R. and Coles S. (2002) "¿Pudo haber sido anticipada probabilísticamente la lluvia extrema que causó la tragedia de Vargas?". **Acta Científica Venezolana**. (Accepted).
63. Coles S., Pericchi L.R. and Sisson S. (2003) "A fully probabilistic approach to extreme rainfall modeling". **Journal of Hydrology**, 273, pp. 35-50.
64. Pericchi, L.R. (2003) Invited discussion of: "*Could Fisher, Jeffreys and Neyman have agreed on testing?*", by J.O. Berger, **Statistical Science**, Vol. 18, No. 1, pp. 13-15.
65. Coles S. and Pericchi L.R. (2003) "*Anticipating catastrophes through extreme value modeling*". **Journal of the Royal Statistical Society, Series C: Applied Statistics**, 52, 4, pp.405-416.
66. Berger J.O. and Pericchi LR. (2004) "*Training samples in objective Bayesian model selection*". **Annals of Statistics**. (Accepted).

Invited Conferences

- VI Symposium Brasileiro de Probabilidade e Estatística, Rio de Janeiro, 1986.
- III International Meeting of Bayesian Statistics, Valencia, España, 1988.
- VIII Symposium Brasileiro de Probabilidade e Estatística, São Paulo, 1990.
- International Workshop on Bayesian Robustness, Milán, 1992.
- IX Symposium Brasileiro de Probabilidade e Estatística, Rio de Janeiro, 1992.
- First Congreso Iberoamericano de Estadística e Investigación Operativa, Cáceres, España (1992).

- VI Purdue Symposium on Decision Theory and Related Fields, Purdue University, West Lafayette, IN, (1992).
- International Conference on Statistical Inference and Biometrics, CIMAT, Guanajuato, Mexico, (1993).
- V International Meeting of Bayesian Statistics, Valencia, España, (1994).
- First Workshop on Intrinsic Bayes Factors and Bayesian Model Selection. Purdue University, West Lafayette, IN, (1995).
- Third World Meeting of the International Society for Bayesian Analysis. Oaxaca, México, (1995).
- VI Latin-American Congress on Probability and Mathematical Statistics. Valparaíso, Chile, (1995).
- II Workshop on Intrinsic Bayes Factors and Bayesian Model Selection. Universidad Simón Bolívar, Caracas, (1995).
- International Workshop on Model Selection. Cagliari, Italia, (1997).
- 59th Biannual Session of the International Statistical Institute, Istanbul, Turkey, (1997).
- Workshop on *Objective Bayesian Methods*, Valencia, España, 1999.
- Sixth World Meeting of the International Society for Bayesian Analysis, Crete, Greece, May 2000.
- American Mathematical Society Summer Research Conference, *Bayes, Frequentist and Likelihood Inference: A synthesis*. Sponsored by AMS, IMS and SIAM. Massachusetts, July, 2000.
- Brazilian National Symposium of Probability and Statistics, 14th SINAPE, Caxambú, Minas Gerais, Brazil. July, 2000.
- III International Workshop in *Objective Bayes Methods*, Ixtapa, México, 2000.
- VIII Congreso Latinoamericano de Probabilidad y Estadística Matemática CLAPEM La Habana, Cuba (2001)
- First Latinamerican Congress of Bayesian Statistics. Ubatuba, Brasil, (2002)
- VII International Valencia Meeting of Bayesian Statistics, Tenerife, España, (2002).

- "Fourth International Meeting on Objective Statistical methods". Granada, Spain. December, 2002.

Research Interests

Statistical Decision Theory
 Subjective and Objective Bayesian Statistics
 Foundations of Statistical Inference
 Extreme Value Theory
 Statistical Applications to Antropology, Biomedicine, Economics, Engineering and Genetics.
 Econometrics
 Statistical Computing
 Bioinformatics
 Statistical Surveys and Census

Current Topics of Interest

Bayesian sensitivity analysis, Robust Bayes and prior ignorance
 Bayesian Model Comparison, Bayesian Objective Hypothesis Testing and Prediction
 Hierarchical models
 Bayesian Analysis of Extreme Values.
 Bayesian ANOVA
 Statistical Analysis of Microarrays data.
 Times Series and Dynamical Models
 Bayesian analysis for the exponential family
 Bayesian analysis of regressions with errors in all variables
 Data transformations and Data analysis
 Bayesian analysis of multiple sampling surveys and census
 Analysis of Diagnosability in medical statistics and expert systems
 Statistical analysis under irregular likelihoods
 Statistical modeling of hydrological floods
 Bayesian forecasting and prediction, and their applications to Econometrics
 Bayesian methods for quality and reliability
 Applications of Simulations to Statistical Computations
 Decision analyses with non-standard loss functions
 Official Statistics