

## CURRICULUM VITÆ

### PERSONAL DETAILS

**Name:** María-Eglée Pérez  
**Date of Birth:** June 25, 1962  
**Nationality:** Venezuelan  
**Marital Status:** Single  
**Gender:** Female  
**Address:** Department of Mathematics  
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### EDUCATION

- . Doctor en Ciencias Mención Matemáticas (Doctor in Mathematical Sciences) (1994). Universidad Central de Venezuela.  
Dissertation: “Bayesian Analysis of Contingency Tables and Generalizations which Involve the Multiparameter Exponential Family”.
- . Magister en Matemáticas (Master in Mathematics) (1987). Universidad Simón Bolívar.  
Dissertation: “Analysis of Multistage Survey as a Bayesian Hierarchical Model”.
- . Licenciado en Matemáticas (Bachelor in Mathematics) (1984). Universidad Simón Bolívar.

### AREAS OF ACADEMIC INTEREST

- . Bayesian Statistics. Biostatistics. Statistical Consulting.

### ACADEMIC APPOINTMENTS

- . Assistant Professor (from August 2005). Department of Mathematics, College of Natural Sciences, University of Puerto Rico, Rio Piedras Campus.  
Teaching: Undergraduate and graduate courses in Probability and Statistics.
- . Associate Professor (1998-2005) . Dept. of Scientific Computing and Statistics, Universidad Simón Bolívar, Caracas, Venezuela.  
Teaching: Undergraduate and graduate courses in Probability and Statistics.

- . Assistant Professor (1997-1998). Dept. of Scientific Computing and Statistics, Universidad Simón Bolívar, Caracas, Venezuela.  
Teaching: Undergraduate and graduate courses in Probability and Statistics.
- . Assistant Professor (1994-1996). Dept. of Mathematics, Universidad Simón Bolívar, Caracas, Venezuela.  
Teaching: Undergraduate courses of Calculus, Linear Algebra, Probability and Statistics; graduate courses in Statistics
- . Lecturer (Assistant) (1987 - 1994). Dept. of Mathematics, Universidad Simón Bolívar, Caracas, Venezuela.  
Teaching: Undergraduate courses in Calculus, Linear Algebra, Numerical Analysis, Probability and Statistics.
- . Lecturer in Statistics (Assistant) (1986-1987). Dept. of Mathematics, Universidad Metropolitana, Caracas, Venezuela.  
Teaching: Undergraduate courses in Probability and Statistics.
- . Teaching Assistant (1984-1987). Dept. of Mathematics, Universidad Simón Bolívar, Caracas, Venezuela.
- . Research Assistant (1983-1984). Dept. of Mathematics, Universidad Simón Bolívar, Caracas, Venezuela.

## PROFESSIONAL EXPERIENCE AND SYNERGISTIC ACTIVITIES

- . Member of the Permanent Committee of the “Seminario Interuniversitario de Investigación en Matemáticas (SIDIM)” (Interuniversity Mathematical Research Seminar), Puerto Rico (from August 2007)
- . Member of the Faculty Ranking Committee, Universidad Simón Bolívar. (2002 - 2005). (this Committee assigns ranks -Assistant Professor, Aggregate Professor or Associate Professor- to newly tenured faculty). President of the Committee (2004-2005).
- . Statistical Consultant for the Spanish Embassy at Venezuela (2003).
- . Director of Program of Graduate Studies in Statistics at Universidad Simón Bolívar (2001-2005)
- . Director of the Center for Statistics and Mathematical Software at Universidad Simón Bolívar (CESMa-USB) (1999-2001)
- . Coordinator of Cultural Activities, Universidad Simón Bolívar (1997-1998).
- . Statistical Consultant for the Biotechnology Laboratory of Cervecería Polar (1997)
- . Statistical Consultant for the *Helicobacter pylori* research network (Venezuela) (1996)

- . Statistical Consultant for INTEVEP (Research Institute of the Venezuelan Oil Industry)(1989)
- . Programming Languages and Statistical Tools: full knowledge of FORTRAN, S, R, SAS, IMSL and MINITAB.

## HONORS AND AWARDS

- . WNAR/COBAL 2 award for best poster presentation (February 2005).
- . Researcher II of the Venezuelan Research Promotion System (2003-2006)
- . Researcher I of the Venezuelan Research Promotion System (2001 - 2003).
- . Researcher I of the Venezuelan Research Promotion System (1998 - 2000).
- . Researcher I of the Venezuelan Research Promotion System (1995 - 1997).
- . Junior Researcher of the Venezuelan Research Promotion System (1992 - 1995).
- . Magister en Matemáticas With Honors
- . Licenciado en Matemáticas Cum Laude

## GRANTS

- . Co-PI of the grant “Resilience thinking for the sustainable management of the Rio Grande de Arecibo watershed: The use of a spatially explicit framework for understanding responses to perturbations”. Inter-Multidisciplinary Research Project, Decanato de Estudios Graduados e Investigacin, UPR, Ro Piedras Campus, 2008-2010.
- . CoPI of the grant “Accelerating Puerto Rican Students into the National Research Effort in Mathematics and Computer Science”. S-STEM 0630927, National Science Foundation, September 15, 2006 to August 31, 2011. PI: Dr. Luis R. Pericchi. CoPI: Dr. H. Janwa, Dr. C. Corrada, Dr. M. E. Pérez.
- . Co-PI of the grant “CREST - CATEC: Center for Applied Ecology and Conservation”. National Science Foundation. Renewal (2007-2012). PI: Dra Elvira Cuevas. (Statistical advisor for the Center and part of the sub-project ”Population Viability Analysis (PVA) of the Mona Island Hawksbill Turtle and Mona Island Iguana in Support of Caribbean-wide Management Efforts”).
- . PI of the grant “Objective Bayesian Methods in Population Genetics”. FIPI 8-80-104, Decanato de Estudios Graduados e Investigacin, UPR, Ro Piedras Campus, 2006-2007. (Finished)

- . PI of two Research Group Grants, sponsored by the Dean of Research, USB (2000 and 2001)
- . CoPI of the grant "Development and Application of Computational Methods for the Quantitative Analysis of Complex Models and Data" CONICIT (Venezuela, 1997-2003).
- . CoPI of the grant "Development of Mathematical and Statistical Software" BID-CONICIT (Venezuela), 1992-1997.

## **GRADUATE STUDENTS**

- . Haydée Lugo. Master in Mathematics, USB 1996.
- . Adollys Newmann. Diploma in Computational Statistics, USB 2001.
- . Richard Rico. Master in Statistics (Honors) USB 2003.
- . Sabá Infante. Doctor in Engineering, USB, 2004.
- . Hans Salas. Diploma in Computational Statistics, USB, 2005
- . Nora Monsalve. Master in Statistics, USB, 2006.
- . María Constanza Gómez. Diploma in Computational Statistics, USB, 2006.
- . Brenda Betancourt. Master in Mathematics, UPR, 2008.
- . Mariely Hernández. Master in Mathematics, UPR (in process).

## **LANGUAGES**

- . Spanish (native) and English (written and spoken).

## **PUBLICATIONS**

### **Refereed Journal Papers**

- . R. L Tremblay, M. E. Perez, M. Larcombe, A. Brown, J. Quarmby, D. Bickerton, G. French, A. Bould (2009) "Dormancy in Caladenia: A Bayesian approach to evaluating latency" Australian Journal of Botany, Vol 57, No. 4, pp 340-350
- . R. L Tremblay, M. E. Perez, M. Larcombe, A. Brown, J. Quarmby, D. Bickerton, G. French, A. Bould (2009) "Population dynamic of Caladenia: Bayesian estimates of transition and extinction probabilities". Australian Journal of Botany, Vol 57, No. 4, pp 351-360

- . M. G. Domínguez-Bello, M. E. Pérez, M. C. Bortolini, F. M. Salzano, L. R. Pericchi, O. Zambrano-Guzmán, B. Linz (2008). "Amerindian *Helicobacter pylori* strains go extinct, as European strains expand their host range". PLoS ONE 3(10): e3307 doi:10.1371/journal.pone.0003307
- . M.A. García-Amado, F. Michelangeli, P. Gueneau, M.E. Pérez, M.G. Domínguez-Bello (2007) "Bacterial detoxification of saponins in the crop of the avian foregut fermenter *Opisthocomus hoazin*". Journal of Animal and Feed Sciences, vol 16, Suppl. 2, 2007, 7881.
- . S. Infante, M. E. Pérez "Modelaje Bayesiano semiparamétrico de datos censurados usando procesos Beta correlacionados" (2006) . *Estadística* (Journal of the Interamerican Statistical Institute) Vol. 58, No. 170-171, p. 71-85
- . M. A. García-Amado, J. R. Del Castillo, M. E. Pérez, M. G. Domínguez Bello (2005) "Intestinal D-glucose and L-alanine Transport in the Japanese Quail (*Coturnix coturnix*)". Poultry Science Vol 86, p. 947-950.
- . I.Pérez-Schael, M. Escalona, B. Salinas, M. Materán, M.E. Pérez, G. González (2003) "Intussusception-associated hospitalization among Venezuelan infants during 1998 through 2001: anticipating rotavirus vaccines". Pediatric Infectious Diseases Journal, Vol. 22, No. 3, p. 234-239.
- . J. Kadane, E. Moreno, M.E. Pérez, L.R. Pericchi (2002). "Applying non-parametric robust Bayesian analysis to non-opinionated judicial neutrality". Journal of Statistical Planning and Inference, Vol. 102, No. 2, p. 425-439.
- . M. G. Domínguez-Bello, B. Beker, M. Guelrud, J. Vivas, S. Peraza, M.E. Pérez, L.R. Pericchi (2002) "Socioeconomic and seasonal variations of *Helicobacter pylori* infection in patients in Venezuela". American Journal of Tropical Medicine and Hygiene, Vol. 66, No. 1, p. 49-51
- . M. E. Pérez, R. Glass, G. Alvarez, L.R. Pericchi, R. González, A. Kapikian and I. Pérez-Schael (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
- . Kadane, J.B., Moreno, E., Pérez, M.E. and Pericchi, L.R. (1999) "Applying non-parametric robust Bayesian analysis to non-opinionated judicial neutrality". In *Proceedings of the First International Symposium on Imprecise Probabilities and Their Applications*, p. 216-224.
- . M. G. Domínguez-Bello, F. Michelangeli, R. Romero, B. Beker, D. Lara, C. Morera, M. A. Vezga, E. Spardella, M. Guelrud, M. E. Pérez and L. R. Pericchi (1997) "Modification of the Christiansen urease test as an inexpensive tool for detection of *Helicobacter pylori*". Diagnostic Microbiology and Infectious Disease, Vol. 28, p. 149-152.
- . M. E. Pérez and L. R. Pericchi (1994). "A Case Study on the Bayesian Analysis of  $2 \times 2$  Tables with all Margins Fixed". REBRAPE, Vol. 8, No 1, p. 27-37.

- . M. E. Pérez (1994). “An automatic and proper Bayesian estimation analysis of 2x2 contingency tables with one and two fixed margins”. TEST, Vol. 3, No. 2, p. 101-112.
- . L. R. Pericchi and M. E. Pérez (1994). “Posterior robustness with more than one sampling model” (with discussion). Journal of Statistical Planning and Inference, Vol. 40, No. 2/3, p. 279-294.
- . M. Torres, M. E. Pérez, P. Dehollain (1988). “Impacto de la Estimulación a Madres Embarazadas en los Patrones Alimentarios de sus Hijos”. Anales Venezolanos de Nutrición, Vol 1, p 11-18.

### Refereed Proceedings

- . M. E. Pérez and L. R. Pericchi (1992). “Analysis of Multistage Surveys as a Bayesian Hierarchical Model”. Bayesian Statistics 4, Bernardo et al, Eds.,p. 723-730
- . M. E. Pérez and L. R. Pericchi (1992). “Analysis of Multistage Surveys as a Bayesian Hierarchical Model”. Proceedings of the IV CLAPEM, p. 189-207

### Book Chapters

- . B. Carlin and M. E. Pérez (2000) “Robust Bayesian Analysis in Medical and Epidemiological Settings”. In *Robust Bayesian Analysis*, D. Ríos-Insúa and F. Ruggeri, Eds. Springer, New York, p. 351-372.

### Books

- . L. Bravo, I. Llatas, M. E. Pérez (2008) ”Análisis de Datos con Técnicas Bayesianas”, Editorial IVIC, Caracas, Venezuela. ISBN 978-980-261-099-0

### Submitted Publications

- . “Forecasting honeybee production in the island of Puerto Rico under scenarios of climate change” D. Delgado, A. Galindo-Cardona, M. E. Prez, C. Restrepo. Submitted to Global Change Biology
- . “High Prevalence of Oral Tetracycline Resistance Genes in Bolivian rural Amerindians” I. Pantoja, M. E. Perez, M. Mojica, G. Vargas-Pinto, G. Rios, K.P. Scott, A. Patterson, H.J. Flint, M. Blaser, M. Dominguez-Bello. Submitted to Antimicrobial Agents and Chemotherapy (short note)
- . “Hitting a shifting target: Consequences of temporal variation in reproductive characteristics and selection landscapes” R. L. Tremblay, J. D. Ackerman, M. E. Perez. Submitted to Philosophical Transactions of the Royal Society B

## In Preparation

- . “Intrinsic priors for testing Hardy-Weinberg equilibrium” Brenda Betancourt and María-Eglée Pérez
- . ”Bayesian analysis of movement after release for headstarted Mona Island iguana (*Cyclura cornuta stejnegeri*)” Mariely Hernández Morales, Mara-Eglée Pérez, Miguel A. García, Nstor Pérez-Buitrago Alberto O. lvarez and Raymond L Tremblay.

## MEETING PRESENTATIONS

- . L. R. Pericchi, M. E. Pérez. “The Case for a Fully Robust Hierarchical Models and Priors for Clinical Trials”  
2009 International Workshop on Objective Bayes Methodology (OBayes 09), University of Pennsylvania, Philadelphia, PA, June 2009.
- . The case for a fully robust hierarchical Bayesian statistical analysis of clinical trials”  
XXIV SIDIM, University of Puerto Rico, Rio Piedras Campus, March 2009, San Juan, Puerto Rico.
- . B. Betancourt, M. E. Pérez. “Intrinsic priors for testing Hardy-Weinberg equilibrium”  
XXIV SIDIM, University of Puerto Rico, Rio Piedras Campus, March 2009, San Juan, Puerto Rico.
- . B. Betancourt, M. E. Pérez. “Bayesian Objective Testing of Hardy-Weinberg Equilibrium”  
Joint Statistical Meetings 2008 (JSM 2008), August 2008, Denver, USA.
- . M. Hernández, M. E. Pérez. “Bayesian analysis of movement after release for headstarted Mona Island iguana (*Cyclura cornuta stejnegeri*)”.  
International Society for Bayesian Analysis (ISBA) Conference 2008, July 2008, Hamilton Island, Australia.
- . L. R. Pericchi, M. E. P’erez. “Adaptive Testing Intervals (ATI) by  $\alpha(n, p)$ .”  
XXIII SIDIM, University of Puerto Rico, Carolina campus, March 2008, Carolina, Puerto Rico.
- . L. R. Pericchi, M. E. Pérez ”Synthesis of Bayes Factors and Estimation for Large Samples: Adaptive Hypothesis Testing Intervals (AHTI)” .  
Joint Statistical Meetings 2007. July 2007, Salt Lake City, USA.
- . M. E. Pérez, L. R. Pericchi. “Objective Bayesian Analysis of Hardy-Weinberg Equilibrium”  
XXII SIDIM, University of Puerto Rico, Ponce campus, February 2007, Ponce, Puerto Rico.
- . L. Bravo de Guenni, M. E. Pérez. ”Bayesian modeling of the probability of catastrophic rainfall events in Venezuela”.  
Conference of the International Society of Bayesian Analysis 2004. Mayo 2004, Via del Mar, Chile.

- . L. Bravo de Guenni, M. E. Prez. "Modeling the probability of catastrophic rainfall events in the Venezuelan states".  
International workshop on Bayesian Data Analysis. Santa Cruz, Estados Unidos de America. Agosto 2003.
- . M. E. Pérez: "Applications of Bayesian Statistics to Life Sciences" .  
SACNAS National Conference, October 2006, Tampa, Florida (Invited talk)  
M. E. Pérez and L. R. Pericchi: "Objective Bayesian Analysis of Hardy-Weinberg Equilibrium".  
Eight Valencia International Meeting on Bayesian Statistics, June 2006, Benidorm, Spain.
- . S Infante, M. E. Perez " Semiparametric Bayesian Modelling of Censored Data using Correlated Beta Processes."  
XXI SIDIM, Universidad del Turabo, February 2006, Gurabo, Puerto Rico
- . S. Infante and M. E. Pérez: "Semiparametric Bayesian Modelling of Censored Data Using Correlated Beta Processes".  
Second Latin American Congress on Bayesian Statistics (COBAL 2). February 2005, San José del Cabo, Mexico. Winner of the WNAR/COBAL 2 award for best poster presentation.
- . R. Rico and M. E. Pérez: "Bayesian Spatial Modeling for Infant Mortality Caused by Infectious Diarrhea in Venezuela".  
1st. IMS-ISBA Joint Statistical Meeting, July 2003, San Juan, Puerto Rico.
- . M. E. Pérez and L. R. Pericchi: "Projecting Priors Across Models".  
Seventh Valencia International Meeting on Bayesian Statistics, June, 2002. Tenerife, Spain.
- . L. R. Pericchi, M. E. Prez . The Impact of Objective Bayes Factors to Robust Estimation, Significance Testing and calibration of p-values. Third International Workshop On Objective Bayesian Methodology, September 2000, Ixtapa, Mxico.
- . L. R. Pericchi and M. E. Pérez: "Applications of Objective Bayes Factors and Objective Priors for Model Selection to Robust Approximate Inference and Adaptive Significance Levels".  
Bayes, Frequentist and Likelihood Inference: A synthesis. July 2000, Mount Holyoke, USA.
- . M. E. Pérez: "Posterior moments in the Bayesian analysis of  $r \times c$  contingency tables".  
VII CLAPEM, Latin American Regional Meeting of the Bernoulli Society. September 1998, Córdoba, Argentina.
- . M. E. Pérez: "Posterior moments in the Bayesian analysis of  $r \times c$  contingency tables".  
Sixth Valencia International Meeting on Bayesian Statistics. June 1998. Alcossebre, Spain.
- . M. E. Pérez: "Measuring agreement: a Bayesian point of view".  
V World Meeting of the International Society for Bayesian Analysis. August 1997, Istanbul, Turkey.



- . M. E. Pérez and L. R. Pericchi: “Probabilistic validation of a new medical test” .  
II Iberoamerican Meeting on Statistics. September 1995. Oaxaca, México.
- . M. E. Pérez: “Bayesian estimation of association in contingency tables with one fixed margin” .  
III World Meeting of the International Society for Bayesian Analysis. September 1995, Oaxaca, México.
- . M. E. Pérez and L. R. Pericchi: “Relationships involving posterior cumulants for the Multiparametric Exponential Family” .  
Fifth Valencia International Meeting on Bayesian Statistics, June, 1994. Alicante, Spain.
- . M. E. Pérez , J. Kadane, E. Moreno and L. R. Pericchi: “Robust and Neutral Analysis of Evidence in Court” .  
V CLAPEM, Latin American Regional Meeting of the Bernoulli Society, June, 1993. Sao Paulo, Brazil.
- . M. E. Pérez and L. R. Pericchi: “On Representation of Prior Impartiality ” .  
Americas Workshop on Bayesian Statistics and Econometrics. December, 1992. Caracas. (Member of the Organizing Committee).
- . M. E. Pérez and L. R. Pericchi: “Relationships for posterior cumulants and moments for the Multiparametric Exponential Family” .  
I Iberoamerican Meeting on Statistics and Operation Research. September, 1992, Cáceres, Spain.
- . M. E. Pérez and L. R. Pericchi: “Analysis of Multistage Survey as a Hierarchical Bayesian Model” .  
IV CLAPEM, Latin American Regional Meeting of the Bernoulli Society, September, 1990. México City.

## REVIEWS

I have acted as a reviewer for: Bayesian Analysis (2007), Journal of Statistical Planning and Inference (2005), Test (1994), "Francisco Aranda Ordaz" competition for best PhD thesis in Statistics written by a Latin American (2001), Proceedings of the XXII SIDIM (2007).

## GRADUATE COURSES TAUGHT (LAST TWO YEARS)

- . MATE6686 Experimental Design and Advanced Data Analysis (3 credits): First Semester 2007-2008, First Semester 2008-2009.
- . MATE8990 Applied Bayesian Analysis (3 credits). Second Semester 2008-2009.
- . MATE6611 Linear Models (3 credits). Second Semester 2008-2009.

**MEMBERSHIP OF PROFESSIONAL SOCIETIES**

Member of the International Society for Bayesian Analysis (ISBA)

San Juan, Puerto Rico, August 2009.

María Eglée Pérez