

## CURRICULUM VITAE

**LELYS ISAURA BRAVO DE GUENNI**

DECEMBER, 2010

### PERSONAL INFORMATION

#### DATE OF BIRTH

22 of September 1958

#### PLACE OF BIRTH

Caracas, Venezuela

#### CITIZENSHIP

Venezuelan; Passport No. 001223884

#### CIVIL STATUS

Married, two children  
(27 and 21 years old)

#### ADDRESS

##### Home

Urb. Terrazas del Club Hipico.  
Res. Los Riscos  
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##### Work

Universidad Simón Bolívar.  
Departamento de Cómputo Científico y  
Estadística y Centro de Estadística y  
Software Matemático (CESMa).  
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### EDUCATION

1975-1980 Bachelor in Mathematics  
Universidad "Simon Bolívar"  
Baruta, Edo. Miranda, Venezuela

1980-1982 Master of Science in Water Resources  
Engineering and Planning.  
Universidad "Simon Bolívar"  
Baruta, Edo. Miranda, Venezuela.

**Dissertation:** An alternative method for flood routing in  
rivers with tributaries (With Honors).

1987-1992 Doctor of Philosophy: PhD taken in the  
Division of Environmental Sciences.  
Griffith University, Brisbane, Nathan, QLD 4111, Australia

**Dissertation:** Stochastic modeling of temporal and spatial  
variability of weather patterns for  
crop model applications.

### AREAS OF INTEREST

Statistical Climatology and Climate Data Analysis  
Climate Risk Assessment and Hydrological Modeling applications  
Stochastic Weather Modeling.  
Stochastic Hydrology.  
Environmental Statistics.  
Spatial Statistics  
Risk Assessment Methods

## **SPECIAL TRAINING COURSES**

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- 1981 Mathematical Models in Water Quality and Control. Universidad Simón Bolívar Caracas, Venezuela. 23-27 Mar.
- 1984 Advanced course in Models and Processes of Crop Production. International Institute of Advanced Studies. Caracas, Venezuela. 3-14 Sep.
- 1984 Course on Experimental Design. CENIAP. Maracay, Venezuela. Oct.
- 1984 Course on Scientific Writing. CENIAP. Maracay, Venezuela. Nov.
- 1984 International Workshop on System Analysis and Crop Simulation for Agro technology Transfer. International Institute of Advanced Studies. Caracas, Venezuela. 3-14 Dec.
- 1985 Training course in the International School of Water Resources. Colorado State University. U.S.A. 7 Jan - 6 Jul. Training consisted of one semester graduate coursework full time.
- 1985 Research training at the USDA Temple Research Station, Texas, 6 Jul - 20 Jul. Research topic: Stochastic models of weather sequences.
- 1985 International Workshop on System Analysis and Crop models. University of Jordan, Amman Jordan, 2-11 Nov.
- 2006 Iberoamerican Workshop on Floods and Natural Disasters. Spanish International Cooperation Agency. Antigua, Guatemala. 5- 9 May.

## **APPOINTMENTS**

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### **ACTUAL POSITION**

Retired Professor in Probability and Statistics at the Department of Scientific Computing and Statistics.

Universidad Simón Bolívar Caracas, Venezuela from the 1<sup>st</sup> of September, 2007 until present.

Actually under annual renewable contract (part-time) at Simón Bolívar University for teaching graduate courses, graduate thesis supervision and developing research.

Administrative position: Coordinator of the Technical Admission Office of Simón Bolívar University since January, 2010.

### **TEACHING POSITIONS**

- Jan 1978 – Jul 1978 Tutor of Mathematics IV and VI. Universidad Simón Bolívar. Venezuela.
- Sep 1978 – Jul 1979 Tutor of Advanced Calculus I, II, and III. Universidad Simón Bolívar. Venezuela.
- Sep 1979 – Dec 1979 Undergraduate teaching assistant. Department of Mathematics. Universidad Simón Bolívar. Venezuela.

Sep 1980 – Sep 1982	Graduate teaching assistant. Department of Mathematics. Universidad Simón Bolívar. Venezuela.
Sep 1982 – Dec 1982	Lecturer (Part time). Department of Mathematics. Universidad Simón Bolívar. Venezuela.
Feb 1988 – Nov 1991	Tutor of Data Analysis I and II, Mathematics and Statistics I and II, Mathematical Techniques A. Griffith University. Brisbane, Australia.
Aug 11 - 29 1992	Invited lecturer at the International Workshop on Data Base Development for Climatic Risk Assessment. COMCIAM Program. Australian International Assistance Development Bureau. Barbados West Indies.
Sep 1992 – Dec 1993	Lecturer (Part time). Department of Mathematics. Universidad Simón Bolívar. Venezuela.
Sep 1992 – Dec 1992	Lecturer in Times Series Analysis in Agricultural Applications. Agronomy Faculty. Universidad Central de Venezuela. Maracay, Venezuela.
May 1993 – Oct 1993	Lecturer in Agricultural Climatology. Agronomy Faculty. Universidad Central de Venezuela. Maracay, Venezuela.
Sep 1993 – Dec 1993	Lecturer in Times Series Analysis in Agricultural Applications. Agronomy Faculty. Universidad Central de Venezuela.
Jan 1994 – Dec 1995	Assistant Professor at the Department of Scientific Computing and Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
Jan 1996 – Jan 1999	Associate Professor at the Department of Scientific Computing and Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
Feb 1999 – Jul 2007	Full Professor at the Department of Scientific Computing and Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
Jul 2008 – Aug 2008	Statistics Summer Course (AMS 005). University of California in Santa Cruz. Department of Applied Mathematics and Statistics.

#### **ADMINISTRATIVE POSITIONS**

Jan 2010 – Present	Coordinator of the Technical Admission Office of Simón Bolívar University.
Apr 2005 – Aug 2007	Head of the Information Technology Laboratory at Universidad Simón Bolívar Caracas, Venezuela.
Sep 2001 – Dec 2003	Director of the Center of Statistics and Mathematical Software (CESMa). Universidad Simón Bolívar. Caracas, Venezuela.

## RESEARCH EXPERIENCE

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- Jan 1980 – Sep 1980      Computer Assistant in the National Plan of Land Evaluation.  
Ministry of Environment and Natural Resources. (MARNR). Caracas, Venezuela.
- Sep 1982 – Apr 1984      Associate Researcher in the graduate program of Water Resources, Engineering and  
Planning. Universidad Simón Bolívar, Venezuela.
- May 1984 – Dec 1993      Research Scientist at the Centro Nacional de Investigaciones Agropecuarias, CENIAP  
(National Centre for Agricultural Research).  
Maracay, Venezuela (on leave for PhD studies from Feb 1987 to Apr 1992).
- Sep 1991 – Feb 1992      Research Scientist. Drought Research Group.  
Queensland Department of Primary Industry. Brisbane, Australia.
- Jan 1995 – Dec 2010      Research Scientist at the Centro de Estadística y Software Matemático  
Universidad Simon Bolivar, Caracas, Venezuela
- Involved in the following research projects:
- Development of algorithms for the simulation of climatic variables (PI).  
Jan 1995 – Dec 1995. Project funded by Universidad Simon Bolivar.
  - Precipitation modeling in space and time for climate impact studies in Venezuela.  
(PI). Project No. S1-2770 funded by the Venezuelan Council of Scientific Research.  
Oct 1995 – Oct 1998.
  - Development and application of computational methods for the quantitative analysis  
of data and complex models. (Co-PI). Project No. G97-000592 funded by the  
Venezuelan Council of Scientific Research. Jan 1997 – Jul 2003.
  - Biosphere-Atmosphere interactions in La Gran Sabana, Parque Nacional Canaima,  
Estado Bolívar, Venezuela. (Co-PI). Project No. G98-001124 funded by the  
Venezuelan Council of Scientific Research. Jan 1998 – Dic 2005.
  - Developing a Hydroclimatic Data Repository for Epidemiological and Environmental  
Risk Assessment. (Co-PI). Project No. G2005-000184 funded by the Venezuelan  
Fund of Scientific Research. Jan 2006 - Present.
  - Risk Factors in habitats reduction of La Gran Sabana, Canaima National Park,  
vulnerability and tools for sustainable development. (Co-PI). Project No. funded by  
the Venezuelan Fund of Scientific Research. Jan 2006- Present.
- Jan 1999 – Dec 1999      Co-PI of the ALFA Network HYDEL (Hydrology for Europe and Latin America)  
funded by the European Union during year 1999, jointly with scientists from  
Austria, Germany, Colombia, Ecuador and France.
- Oct 2000 – Oct 2002      Co-PI of the IAI-PESCA research project No. 011: *Downscaling activities in the  
context of the LBA domain*.  
Project funded by the Interamerican Institute of Global Change Research (IAI).

- Jan 2001 – Dec 2001      Co-PI of the Project: *Assessment of extreme rainfall vulnerability for South America*. Project funded by UNESCO Montevideo.  
Joint Project with the University of New Hampshire, USA.
- Jul 2003 – Dec 2003      PI of the project: Development of Indicators of inter-annual variability of precipitation for South America: Period 1960-2000.  
*Project funded by UNESCO Montevideo, Uruguay.*
- Jul 2003 – Jul 2007      PI of the project: Statistical modeling of the vulnerability and risk of the Venezuelan population to extreme rainfall.  
Project funded by the Venezuelan Fund of Scientific Research (FONACIT).

## **VISITING FELLOWSHIPS**

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- Aug 1995 – Sep 1995      Visiting Professor: University of Stuttgart. Institute of Water Resources. Germany.
- Jul 1996 – Aug 1996      Visiting Professor: Australian National University, Centre for Resources and Environmental Studies. Canberra, Australia.
- Aug 1997                      Visiting Professor: University of New Castle upon Tyne, Department of Civil Engineering.
- May 1999                      Visiting Professor: Bodenkultur University. Institute of Water Resources.
- Sep 2000 – Jul 2001      Visiting Professor (Sabbatical year): University of New Hampshire, Institute for the Study of the Earth, Ocean and the Space, Complex Systems Research Center, Water System Analysis Group
- Jul 2001 – Aug 2001      Visiting Professor: Laboratory GRESE (Laboratory for Risk Management in Water Sciences), ENGREF, Paris, France.
- Aug 2005 – Sep 2005      Visiting Professor: Potsdam Climate Impact Research Institute (PIK). Potsdam, Germany.
- Sep 2005                      Visiting Professor. Stuttgart University, Water Resources Institute Stuttgart, Germany.
- Apr 2006                      Visiting Professor. Mathematics Research Center, Guanajuato, México.
- Aug 2006                      Visiting Professor. Applied Mathematics and Statistics Department. University of California in Santa Cruz.
- Sep 2007- Nov 2007      Visiting Professor. Stuttgart University, Water Resources Institute Stuttgart, Germany.
- Apr 2005 – Jun 2005      Visiting Scientist at the National Institute of Spatial Research (INPE). Sao José dos Campos. Brazil.
- Sep 2008 – Dec 2008      Visiting Scientist at the National Institute of Spatial Research (INPE). Sao José dos Campos. Brazil.

## AWARDS AND SCHOLARSHIPS

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Griffith University Postgraduate Research Scholarship Award. Jan 1989 – March 1991.

Classified Researcher Level II (maximum level is IV) in 2005 (renewed in 1995, 1997, 1999 and 2001, 2004 and 2008) by the Venezuelan System for the promotion of research (SPI).

Annual prize for the best scientific paper (Engineering area) for the work: Sansó, B. and **Guenni, L.** 1999. Venezuelan rainfall data analysed using a Bayesian space-time model. *Applied Statistics. Journal of the Royal Statistical Society*, 48 (3): 345-362. Venezuelan Council of Scientific Research (1999-2000).

Zayed Internacional Prize for the Environment 2005. Second Category, to all co-authors of the Millennium Ecosystem Assessment.

## GRADUATE STUDENTS TUTORED

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- 1995 Oscar Silva. MSc. in Soil Sciences (with honors). Universidad Central de Venezuela, Maracay, Venezuela.
- 1996 Marisabel Rojas Polanco. MSc. in Statistics. Universidad de Los Andes, Mérida, Venezuela.
- 1998 Aracelis Hernández González. MSc. in Mathematics. Universidad Simón Bolívar Caracas, Venezuela.
- 2000 Lisbeth Betancourt. MSc. in Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
- 2001 Dhamelys Saade. Specialist in Computacional Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
- 2002 Carlos Dommar. Specialists in Computacional Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
- 2005 Aracelis Hernández González. Doctor in Engineering. Universidad Simón Bolívar. Caracas, Venezuela.
- 2005 Lisbeth Torres. MSc. in Computer Sciences. Universidad Simón Bolívar, Caracas, Venezuela.
- 2005 María Dolores Delgado. MSc. in Biological Sciences. Universidad Simón Bolívar. Caracas, Venezuela (with honors).
- 2008 Alexis Durán. MSc. in Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
- 2008 Jhan Rodríguez. MSc. in Statistics. Universidad Simón Bolívar, Caracas, Venezuela.
- 2009 Pedro Sequera. MSc. in Statistics. Universidad Simón Bolívar, Caracas, Venezuela (with honors).
- 2009 Desireé Villalta. MSc. in Statistics. Universidad Simón Bolívar, Caracas, Venezuela.

## PUBLICATIONS (PEER REVIEWD PAPERS)

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- Durán, A. and **Guenni, L.** 2010. Probabilistic Estimation of Climate Change in Venezuela using a Bayesian Approach. *Revista Colombiana de Estadística*. In Press.
- Hernandez, A., **Guenni, L.** and Sansó, B. 2009. Extreme limit distributions of truncated models for daily rainfall. *Environmetrics*. 20(8): 962-980.
- Guenni, L.**, Degryze, E. y Alvarado, k. 2008. Estimación de la tendencia y la estacionalidad de la precipitación mensual de Venezuela. *Revista Colombiana de Estadística*. 31(1): 41-65.
- Sansó, B. and **Guenni, L.** 2004. A Bayesian approach to compare observed rainfall data to deterministic simulations. *Environmetrics*, 15:1-16.
- Guenni, L.**, Hernandez, A. And Fillipone, M. 2003. Modelling population vulnerability and risk to extreme rainfall events in Venezuela. *Acta Científica Venezolana*, Vol. 54, Sup. 1: 2-12.
- Guenni, L.** and Bárdossy, A. 2002. A two step disaggregation method for highly seasonal monthly rainfall. *Stochastic Environmental Research and Risk Assessment*. 16 (3): 188-206.
- Guenni, L.**, Sansó, B. and Betancourt, L. 2002. Oceanic influence on the precipitation of the South East of Venezuela. *Environmetrics*. 13: 263-279.
- Castrillo, M., Fernandez, D., Calcagno, A.M., Trujillo, I and **Guenni, L.** 2001. Responses of ribulose-1,5-bisphosphate carboxylase, protein content, and stomatal conductance to water deficit in maize, tomato and bean. *Photosynthetica*, 39(4): 221-226.
- Sansó, B. and **Guenni, L.** 2000. A non-stationary Multi-site model for rainfall. *Journal of the American Statistical Association*, 95(452):1089-1100.
- Pielke, R.A. (Sr.) and **L. Guenni**. 1999. Vulnerability assessment of water resources to changing environmental conditions. *Global Change Newsletter*, No. 39, pp. 22-23.
- Sansó, B. and **Guenni, L.** 1999. Venezuelan rainfall data analysed using a Bayesian space-time model. *Applied Statistics . Journal of the Royal Statistical Society*, 48 (3): 345-362.
- Sansó, B. and **Guenni, L.** 1999. A stochastic model for tropical rainfall at a single location. *Journal of Hydrology*, 214:64-73.
- Guenni, L.**, Ojeda, F. and M.C. Key. 1998. Periodic model selection for rainfall using Conditional Maximum Likelihood. *Environmetrics*, 9:407-417.
- Guenni, L.** and M.F. Hutchinson. 1998. Spatial Interpolation of the parameters of a rainfall model from ground-based data. *Journal of Hydrology*, 213-213 (1-4): 335-347.
- Hutjes, R.W.A. *et al.* (**L. Guenni** included). 1998. Biospheric Aspects of the Hydrological Cycle. *Journal of Hydrology*, 213-214(1-4):1-21.
- Guenni, L.** 1997. Spatial Interpolation of Stochastic Weather Model Parameters. *Journal of Environmental Management*, 49:31-42.

- Guenni, L.**, Hutchinson, M.F., Hogarth, W., Rose, C.W. and Braddock, R. 1996. A model for the Seasonal Variation of Rainfall at Adelaide and Turen. *Ecological Modelling*, 85:203-217.
- Guenni, L.**, Charles-Edwards, D., Rose, C.W., Braddock, R. and Hogarth, W. 1990. Stochastic weather modelling: A phenomenological approach. *Mathematics and Computers in Simulation*, 32:113-118.
- Guenni, L.**, Rose, C.W., Hogarth, W., Braddock, R. and Charles-Edwards, D. 1990. Seasonal Changes in the Interrelationships between Climatic Variables. *Agricultural and Forest Meteorology*, 53:45-58.
- Wagner, M., A. Barrios, G. Medina y **L. de Guenni**. 1988. Evaluación de un modelo de riego en caraota (*Phaseolus vulgaris* L.) en la Estación Experimental de Santa Cruz, Estado Aragua. *Agronomía Tropical*, 38:109-133.
- Wagner, M., **L.B. de Guenni**, G. Medina y M. Mujica. 1986. Evaluación de un Modelo de Riego aplicado en plantillas de caña de azúcar (*Saccharum sp.*) en condiciones de suelo Mollisol. *Caña de Azúcar*. 4(2):143-167.
- Comerma, J.A., **L.B. de Guenni** y G. Medina. 1985. Validación del Balance Hídrico del modelo CERES-MAIZ en la zona de Maracay, Estado Aragua, Venezuela. *Agronomía Tropical*, 35:115-132.
- Córdova, J.R., Rodríguez-Iturbe, I. and **L.B. de Guenni**. 1983. On the estimation of the mean and variance of Annual Sediment Yield based on basin and storm characteristics. In: Scientific Procedures applied to the Planning, Design and Management of Water Resources Systems (Proceedings of Hamburg Symposium, August, 1983). IAHS Publ. Num. 147:125-139.

## **PUBLICATIONS (PEER REVIEWED BOOK CHAPTERS)**

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- Guenni, Bravo de, L.**, Cardoso, M., Goldammer, J., Hurtt, G., Mata, J.L., Ebi., K, House, J., Valdes, J. Norgaard, R. (rev. Ed.), 2005: Regulation of Natural Hazards. In: Rashid Hassan and Robert Scholes (Eds.): *The Millennium Ecosystem Assessment, Vol. I, Current State and Trends, Chapter 16, Part II*, pp. 441-454, Island Press, Washington DC.
- Guenni, L.** 1995. Spatial Interpolation of the Parameters of Stochastic Weather Models. In: G. Paoli (ed.) *Climate Change, Uncertainty and Decision-Making*. Institute for Risk Research. Waterloo, Canada. pp. 61-79.
- Comerma, J.A. and **L.B. de Guenni**. 1987. The IBSNAT simulation models as a mean of Quantitative Land Evaluation in Development countries. In: Beek, K.J.; Burrough, P.A.. and McCormack, D.E. *Quantified Land Evaluation Procedures*. ITC Publ. Num. 6. Enschede, The Netherlands. pp. 44-49.

## **PUBLICATIONS (BOOK REVIEWS)**

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- Kabat P, Claussen M, Dirmeyer PA, Gash JHC, **Bravo de Guenni L**, Meybeck M, Pielke RA Sr., Vörösmarty CJ, Hutjes RWA, Lütkeemeier S (Eds.). 2004. *Vegetation, Water Humans and the Climate: a New Perspective on an Interactive System*, Springer, Berlin, pp. 600. Hardcover, ISBN 3540424008.

## **PUBLICATIONS (TEXTBOOKS)**

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**Bravo de Guenni, L.**, LLatas, I. y M.E. Pèrez. 2008. Análisis de datos con Técnicas Bayesianas. Ediciones IVIC. Caracas, Venezuela., pp. 145. ISBN 978-980-261-099-0.

## **PUBLICATIONS (PROCEEDINGS)**

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Bárdossy, A., Li, J. and **Guenni, L.** 2008. Observation network design for environmental variables using a copula based approach. Proceedings of Geostats 2008. 1-5 sep., Santiago de Chile.

**Guenni, L.** 1997. Space-time modelling of rainfall for climate impact assessments in the Tropics. Proceedings of the 51st session of the International Statistical Institute.

**Guenni, L.** Spatial Interpolation of Rainfall Statistics at different time scales. Proceedings of the Sixth International Meeting on Statistical Climatology. 19-23 Junio, 1995. Galway, Irlanda. pp. 567-570.

Hutchinson, M.F. and **Guenni, L.** 1992. Spatial interpolation of Real Time monthly rainfall for Queensland. Proceedings of the Sixth Queensland Hydrology Symposium. 11-12 February, 1992. The University of Queensland, Brisbane, Australia.

**Guenni, L.**, Rose, C.W., Hogarth, W. and Braddock, R. 1991. Use of stochastically simulated weather for crop model predictions. Proceedings of the Conference on Agricultural Meteorology. 17-19 July, 1991. The University of Melbourne, Parkville, Australia. pp. 65-68.

**Guenni, L.** and Hutchinson, M. 1990. Stochastic Weather Modelling and the Problem of Data Sparsity. Poster Paper Proceedings. International Symposium on Climatic Risk in Crop Production. 2-6 July, 1990. The University of Queensland, Brisbane, Australia. pp. 10-11.

Comerma, J.A. and **L.B. de Guenni.** 1986. The use of Simulation models for Agrotechnology Transfer in Venezuela. IBSNAT Symposium. Proceedings of the XIII Congress Intern. Soc. of Soil Sci. Hamburg, W. Germany.

**Guenni, L.B.** de, Valdés, J., Scherer, G. and Maulino, C..1983. Un método alternativo para el tránsito de crecientes en ríos con tributarios. IV Jornadas Nacionales de Ingeniería Hidráulica. Caracas, Venezuela. June, 1983.

## **TECHNICAL REPORTS**

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**Guenni, L.**, Nobre, C., Marengo, J., Huerta, G. And Sansó, B. Oceanic influence on extreme rainfall trends in the North central coast of Venezuela: Present and future climate assessments. Centro de Estadística y Software Matemático. Reporte Técnico No. 2009-08 (<http://www.cesma.usb.ve/reportes/2009-08>).

**Guenni, L.** and Andrés Bárdossy. 1998. Disaggregation of highly seasonal monthly rainfall. Centro de Estadística y Software Matemático, Universidad Simón Bolívar. Tech. Rep. 98-10. 24 pp.

**Guenni, L.** and M. Loreto. 1998. Space-time modelling of monthly rainfall for climate impact studies in Venezuela. Centro de Estadística y Software Matemático, Universidad Simón Bolívar. Tec. Rep. 98-06. 14 pp.

- Guenni, L.**, Ojeda, F. and M.C. Key. 1997. Periodic model selection for rainfall using Conditional Maximum Likelihood. CESMa Tech. Rep. 97-03. Universidad Simón Bolívar, Caracas, Venezuela.
- Sansó, B. and **Guenni, L.** 1997. A dynamic model for Tropical rainfall. CESMa Tech. Rep. 97-02. Universidad Simón Bolívar, Caracas, Venezuela.
- Sansó, B. and **Guenni, L.** 1996. A Bayesian estimation of the parameters of a space-time model for rainfall. CESMa Tech. Rep. 96-01. Universidad Simón Bolívar, Caracas, Venezuela. 14 pp.
- Guenni, L.**, Bárdossy, A. and U. Haberlandt. 1996. Spatial Interpolation of rainfall data at different time scales. CESMa Tech. Rep. 96-11. Universidad Simón Bolívar, Caracas, Venezuela.
- Guenni, L.** and M. Hutchinson. Discussion on Spatial-Temporal Analysis of Weather Data and its relationship with Downscaling. Downscaling workshop of the Weather Generator Project. BAHF-F4, Rep. No. 4. 25-28, June, 1994. Karlsruhe, Germany, pp. 53-57.
- Guenni, L.** y Prada, Y. 1993. Evaluación de la disponibilidad de humedad de los suelos para el proyecto de evaluación de tierras Hamaca 400. Reporte Técnico. Contrato de Servicios FONAIAP-PALMAVEN. 52 pp.
- Guenni, L.B.** de y Wiedenhofer, H. 1985. Aplicación de una metodología propuesta de validación de los modelos de simulación IBSNAT. Centro Nacional de Investigaciones Agropecuarias. Serie A. Maracay. Venezuela.

## **PUBLICATIONS (IN PREPARATION)**

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- Rodríguez, J and **Guenni, L.** Population Vulnerability to Extreme Rainfall Events. To be submitted to the Journal of the International Society of Integrated Disaster and Risk Management.
- Villalta, D. and **Guenni, L.** Modeling population vulnerability to malaria incidence in Sucre State, Venezuela using a Bayesian approach. To be submitted to the Journal of Agricultural, Biological and Environmental Statistics.
- Sequera, P. and **Guenni, L.** The influence of macroclimatic variables on the precipitation of Venezuela. To be submitted to the Journal of Atmospheric and Oceanic Technology.

## **CONFERENCES, SIMPOSIA AND WORKSHOPS**

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- Guenni, L.B. de, Valdés, J., Scherer, G. y Maulino, C. Un método alternativo para el tránsito de crecientes en ríos con tributarios. IV Jornadas Nacionales de Ingeniería Hidráulica. Caracas, Venezuela. 8 - 11 Jun, 1983.
- Comerma, J.A. y Guenni, L. Perspectivas del uso de modelos de simulación de cultivos prioritarios como instrumento de transferencia de agrotecnologías. IX Congreso Latinoamericano Ciencias del Suelo. Cali, Colombia. 1986.
- Comerma, J.A. and L.B. de Guenni. The use of Simulation Models for Agrotechnology Transfer in Venezuela. IBSNAT Symposium. XIII Congreso Intern. Soc. of Soil Sci. Hamburg, W. Germany. 1986.
- Comerma, J. y B. de Guenni, L. Algunos Resultados sobre la Validación del Modelo CERES-MAIZ en Venezuela. XXXVI Convención Anual de ASOVAC. Valencia, Venezuela. 16 – 21 Nov, 1986.

Guenni, L. and D. Charles-Edwards. Phenomenological Random Generator for Crop Models. Fourth Queensland Hydrology Symposium. Brisbane, Australia. 1-2 Feb, 1989.

Guenni, L., D. Charles-Edwards, C.W. Rose, W. Hogarth. and R. Braddock. Stochastic Weather Modelling: A phenomenological approach. VIII SSA-IMACS Biennial Conference on Modelling and Simulation. Canberra, Australia. 25-27 Sep, 1989.

Guenni, L. and M. Hutchinson. Stochastic Weather Modelling and the problem of Data Sparsity. International Symposium on Climatic Risk in Crop Production (Poster Paper Section). Brisbane, Australia. 2-6 Jul, 1990.

Guenni, L., Rose, C., Hogarth, W. and Braddock, R. Use of stochastically simulated weather for crop model predictions. Conference on Agricultural Meteorology. Melbourne, Australia. 17-19 Jul, 1991.

Hutchinson, M.F. and Guenni, L. Spatial Interpolation of Real Time Monthly Rainfall for Queensland. Sixth Queensland Hydrology Symposium. 11-12 Feb, 1992.

Guenni, L. Point Rainfall Generation for weather-driven Crop models: The Spatial Extension. Jornadas Panamericanas de Matematicas Aplicadas y Computacionales. Brisbane, Australia. 1-15 Jan, 1993. Caracas, Venezuela.

Guenni, L. Research Activities in the Venezuelan Amazonia. Preliminary Workshop on the Atmosphere-Geosphere Experiment in the Amazonia (LAMBADA/BATERISTA). San José Dos Campos, Brazil (Invited Paper). 8-11 Sep, 1993.

Guenni, L. Characterization of the interrelationships between climatic variables and their stochastic simulation. Workshop on risk estimation techniques for extreme weather events. Toronto, Canadá. 20-22 Feb, 1994.

Guenni, L. and M. Hutchinson. Selección óptima del número de coeficientes de dos funciones periódicas ajustadas a un modelos de procesos puntuales de precipitación. VII Jornadas de Matemáticas. Barquisimeto, Venezuela. 23-25 Mar, 1994.

Guenni, L. and M. Hutchinson. Discussion on Spatial-Temporal Analysis of Weather Data and its relationship with Downscaling. Downscaling workshop of the Weather Generator Project (BAHC-F4). Karlsruhe, Germany. 25-28, Jun, 1994.

Guenni, L. and M. Hutchinson. Spatial Interpolation of the Parameters of a Rainfall model from ground-based data. First Science Conference of the BAHC IGBP Core Project and XX General Assembly of the European Geophysical Society. 3-7 Apr, 1995. Hamburg, Germany.

Guenni, L. Spatial Interpolation of Rainfall Statistics at different time scales. Sixth International Meeting on Statistical Climatology. Galway, Ireland. 19-23 Jun, 1995.

Guenni, L., Bárdossy, A. and Haberlandt, U. The value of point data on the spatial interpolation of pollution related variables at different time scales. SPRUCE III Conference. Mérida, México. 11-15 Dec, 1995.

Ojeda, F., Key, M.C. y Guenni, L. Estudio de dos modelos estocásticos de precipitación mensual. XLV Convención Anual de ASOVAC. Caracas, Venezuela. Nov, 1995.

Guenni, L., Bárdossy, A. and Haberlandt, U. Una comparación empírica de Splines y Kriging para dos conjuntos de datos de lluvia en localidades contrastantes. IX Jornadas de Matemáticas. Maracaibo, Venezuela . 24-26 Abril, 1996..

Guenni, L., M.T. Martelo y A. Ramírez. Preparatory Activities of LBA in Venezuela. Reunión de Coordinación Científica del Experimento LBA (Large Scale Biosphere-Atmosphere Experiment in Amazonia. São José dos Campos, Brasil. 27 Jun - 1 Jul, 1996.

Guenni, L., M.C. Key and A. Hernández. Modelling monthly Rainfall in a Tropical Environment. Sydney International Statistical Congress. Sydney, Australia. 8 - 12 Jul, 1996.

Guenni, L., M.C. Key and A. Hernandez. Periodic model selection for rainfall using Conditional Maximum Likelihood. Conference on Environmetrics. Innsbruck, Austria. 4 – 8 Aug, 1997.

Guenni, L. Space-time modelling of rainfall for climate impact assessment in the tropics. 51 Session of ISI. Istanbul, Turquía. (Invited Paper). 18 – 26 Aug, 1997.

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(Note: The author who presented the paper is underlined).

## **INVITED CONFERENCES AND SEMINARS**

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"Tránsito de crecientes en ríos con tributarios". May, 1983. Facultad de Ingeniería, UCV. Caracas, Venezuela.

"Rainfall models and Crops". Annual Meeting of the Australian Society for Operations Research. Jun, 1991. Griffith University. Brisbane, Australia.

"Modelos Estocásticos de Simulación Climática y su Aplicación a Modelos de Cultivos". Jul, 1992. Facultad de Agronomía, UCV. Postgrado en Estadística. Maracay, Venezuela.

"Modelos de Producción Vegetal y Modelos Agrofísicos". Apr, 1993. Facultad de Agronomía, LUZ. Cátedra de Agrofísica. Postgrado en Fruticultura. Maracaibo, Venezuela.

“Hacia un modelaje espacial de las relaciones agua-suelo-planta”. Apr, 1994. Facultad de Agronomía, UCV. Postgrado en la Ciencia del Suelo. Maracay, Venezuela.

“Spatial Analysis of Rainfall in Data Sparse Region”. Sep, 1995. Universidad de Stuttgart. Instituto de Recursos Hídricos. Stuttgart, Germany.

“Spatial and Temporal Analysis of Rainfall in Data Sparse Regions”. Aug, 1996. Griffith University. Div. of Env. Sciences. Brisbane, Australia.

“Space-time modeling of monthly rainfall for climate impact studies in the tropics”. Aug, 1997. University of Newcastle upon Tyne, Newcastle, England.

“Modelaje de la precipitación en Espacio y Tiempo para estudios de Impacto Climático”. Feb, 1999.. Universidad Politécnica Nacional, Quito, Ecuador.

“Space-time modeling of monthly rainfall for climate impact studies in the tropics”. May, 1999. Institute for Water Resources. University of Bodenkultur, Vienna, Austria.

“Modeling the temporal and spatial variability of rainfall in the tropics”. Dec, 1999. Department of Atmospheric Sciences. Colorado State University, USA.

“Space – Time models for rainfall”. Oct, 2000. Water Systems Analysis Group. University of New Hampshire, USA.

“Population Vulnerability and Extreme Weather”. Sep, 2002. University of Bonn, ZEF, Germany.

“Global Change Research Activities in Venezuela”. Third IGBP Congress. Meeting of the IGBP National Committees. May, 2003. Banff, Canada.

“El Cambio Climático: Causas y Consecuencias sobre los recursos hídricos”. Primer congreso internacional del agua....por la vida. Puerto Ordaz, 9-10 Junio, 2005.

“Population vulnerability and risk assessment to extreme rainfall events. Case study: South America”. Potsdam Institute for Climate Impact Research (PIK), Germany, sep 13<sup>th</sup>, 2005.

“*Extreme value limit distributions of truncated models for daily rainfall*”. Institut für Wasserbau, Stuttgart University, Stuttgart, Germany, Sep 27<sup>th</sup>, 2005.

“*Extreme values limit distributions of truncated models for daily rainfall*”. Centro de Investigaciones Matemáticas, Guanajuato, México, Apr. 20<sup>th</sup>, 2005.

“*El Papel de la Estadística en la Investigación sobre el Cambio Climático*”. V Jornadas de Aplicaciones Matemáticas. FACYT, Universidad de Carabobo, Valencia, Venezuela. May 20<sup>th</sup>, 2006.

“The concept of Entropy and Network Design”. Institut für Wasserbau, Stuttgart University, Stuttgart, Germany, Oct 30<sup>th</sup>, 2007.

“The value of stochastic approaches in the vulnerability assessment of extreme weather”. Potsdam Institute for Climate Impact Research (PIK), Germany, november 22<sup>th</sup>, 2007.

“The value of stochastic approaches in the vulnerability assessment of extreme weather”. Centro de Pronóstico del Tiempo y del Clima. Cachoeira Paulista, Brasil. May 29<sup>th</sup>, 2008.

“Oceanic influence in the detection of extreme rainfall events in the North Central Coast of Venezuela”. Universidad Federal de Río de Janeiro. Instituto de Matemática, Rio de Janeiro Brasil. Apr 29th, 2009.

“Oceanic influence in the detection of extreme rainfall events in the North Central Coast of Venezuela”. Universidad de Puerto Rico en Río Piedras. Departamento de Matemática, San Juan de Puerto Rico. Jan 29th, 2010.

## **AFFILIATIONS IN SCIENTIFIC COMMITTEES AND ASSOCIATE EDITOR**

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Member of the National Committee of Hydrology and Meteorology of the National Council of Scientific Research. 1992 - 1993.

Member of the Science Steering Committee of the Core Project Biospherical Aspects of the Hydrological Cycle of the International Geosphere-Biosphere Program (IGBP). Jan 1997 – Oct 2002.

Coordinator of the National Committee of the LBA project (Large Scale Biosphere-Atmosphere experiment in the Amazonia). Jul 1997- Sep 2000.

Chair of the National Committee of the International Geosphere-Biosphere Program (IGBP) in Venezuela. Jan 1998 – Sep 2000.

Coordinating Lead Author of the Millennium Ecosystem Assessment, Conditions Working Group chapter on *Regulation of Natural Hazards: floods and fires*. Jan 2003 – Nov 2005.

Member of the Board of Directors of The International Environmetrics Society (TIES) as Regional Representative since Sep 2004.

Associate Editor of the Environmetrics Journal since January 2010.

Chair of the 21<sup>st</sup> Conference of the The International Environmetrics Society (TIES) 2010, Margarita Island, Venezuela, 20-25 June, 2010.