

RESUME

Name: Carolina Susana Vera

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Current Position:

2011-Present Director of UMI-IFAECI/CNRS

1993-Present Full Professor of the Department of Atmospheric and Ocean Sciences, University of Buenos Aires.

1995-Present Principal Researcher of the National Council of Research and Development (CONICET), Argentina, at CIMA.

Education:

1986 Licenciante in Meteorological Sciences, University of Buenos Aires

1992 Ph.D., Department of Atmospheric Sciences, University of Buenos Aires (under Prof. Eugenia Kalnay)

Areas of Specialization: Large-scale atmospheric dynamics, climate variability and change in the Southern Hemisphere.

Publications (most relevant ones of the last 7 years):

Vera, C.; J. Baez; M. Douglas; C. B. Emmanuel; J. Marengo; J. Meitin; M. Nicolini; J. Nogues-Paegle; J. Paegle; O. Penalba; P. Salio; C. Saulo; M. A. Silva Dias; P. Silva Dias; and E. Zipser, 2006: The South American Low-Level Jet Experiment (SALLJEX), *Bulletin of the American Meteorological Society*, 87, 63-77.

Vera, C., G. Silvestri, B. Liebmann, and P. Gonzalez 2006: Climate change scenarios for seasonal precipitation in South America from IPCC-AR4 models. *Geophys. Res. Lett.*, 33, L13707, doi:10.1029/2006GL025759.

Vera, C., W. Higgins, J. Amador, T. Ambrizzi, R. Garreaud, D. Gochis, D. Gutzler, D. Lettenmaier, J. Marengo, C. R. Mechoso, J. Nogues-Paegle, P. L. Silva Dias, and C. Zhang, 2006 A Unified View of the American Monsoon Systems. *J. Climate*, Vol. 19, 4977–5000.

Cerne, B., C. Vera, B. Liebmann, 2007: The nature of a heat wave in eastern Argentina occurring during SALLJEX. *Mon. Wea. Rev.* 135, 1165-1174.

Gonzalez, M., C. Vera, B. Liebmann, J. Marengo, V. Kousky, D. Allured, 2007: The nature of the rainfall onset over central South America. *Atmósfera*. 20(4), 379-396.

González, P. M., C. Vera, B. Liebmann, G. Kiladis, 2008: Intraseasonal variability in subtropical South America as depicted by precipitation data. *Clim. Dyn.*, 30, 727–744.

Silvestri, G., C. S. Vera, D. Jacob, S. Pfeifer, C. Teichmann, 2008: A high-resolution 43-year atmospheric hindcast for South America generated with the MPI regional model. *Clim. Dyn.*, 32, 5, 693-709. DOI 10.1007/s00382-008-0423-5.

Silvestri, G., C. S. Vera, 2008: Evaluation of the WCRP-CMIP3 model simulations in the La Plata Basin. *Meteorol. Appl.* 15, 497–502.

Vera, C. S., G. Silvestri, 2009: Precipitation interannual variability in South America from the WCRP-CMIP3 Multi-model dataset. *Climate Dynamics*, 32, 1003-1014.

Carbajo, A., C. Vera, and, P. Gonzalez, 2009: Hantavirus reservoir *Oligoryzomys longicaudatus* spatial distribution model under a climate change scenario in Argentinean Patagonia. *International Journal of Health Geographics* 2009, 8:44.

Silvestri, G., C. S. Vera, 2009: Interdecadal variations of the Southern Annular Mode and its impact on South America. *Journal of Climate*. 22, 6142–6148. DOI: 10.1175/2009JCLI3036.1

Marengo, J. A., Liebmann, B., Grimm, A. M., Misra, V., Silva Dias, P. L., Cavalcanti, I. F. A., Carvalho, L. M. V., Berbery, E. H., Ambrizzi, T., Vera, C. S., Saulo, A. C., Nogues-Paegle, J., Zipser, E., Seth, A. and Alves, L. M. (2010), Recent developments on the South American monsoon system. *International Journal of Climatology*, Vol. 32, 1, 1-21

- Cerne, B., C. Vera, 2011: Influence of the intraseasonal variability on heat waves in subtropical South America. *Climate Dynamics*, 36, 2265–2277.
- Liebmann, B., G. Kiladis, D. Allured, C. Vera, C. Jones, L. M. V. Carvalho, I. Blade, P. González, 2011: Mechanisms associated with large daily precipitation events in Northeast Brazil. *Journal of Climate*, 24, 376-396.
- Junquas, C., C. S. Vera, L. Li, H. Le Treut, 2012: Summer Precipitation Variability over Southeastern South America in a Global Warming Scenario. *Scenario. Climate Dynamics*, 38, 9, 1867-1883
- Goddard, L., J. Hurrell, B. Kirtman, J. Murphy, T. Stockdale, C. Vera, 2012: Provision of Seasonal-to-Decadal Climate Information to Underpin Climate Services. *Bull. Amer. Meteor. Soc.*, 93, 621–629. (Authors in alphabetic order)
- Summary for Policymakers of the IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX) (<http://ipcc-wg2.gov/SREX/>). (Co-Author)
- Chapter 3 of the IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX) (<http://ipcc-wg2.gov/SREX/>). (Co-Author)
- Junquas, C., C. S. Vera, L. Li, and H. Le Treut, 2013: Impact of SST changes projected in a global warming scenario on summer rainfall in southeastern South America. Accepted in *Climate Dynamics*.
- Vera, C., W. Gutowski, C. R. Mechoso, B. N. Goswami, C. Reason, C. D. Thorncroft, J. A. Marengo, B. Hewitson, H. Hendon, C. Jones, P. Lionello, 2012: Understanding and Predicting Climate Variability and Change at Regional Scales. Chapter of the Book "Climate Science for Serving Society: Research, Modelling and Prediction Priorities". In press. Springer Editorial Monograph series.
- Flombaum, P., J. L. Gallegos, R. Gordillo, J. Rincón, L. L. Zabala, N. Jiao, D. Karl, W. K. W. Li, M.W. Lomas, D. Veneziano, C. Vera, J. Vrugt, and A. Martiny, 2013: Present and future global distributions of the marine Cyanobacteria *Prochlorococcus* and *Synechococcus*. Submitted to PNAS.
- Alvarez, M., C. Vera, G. Kiladis, and B. Liebmann, 2013: Intraseasonal Variability in South America during the Cold Season. Submitted to *Climate Dynamics*

Service (Partial list):

- 2001-2005 Chair of the WCRP/CLIVAR/South American Low-Level Jet Scientific Working Group
- 2004-2006 Chair of the the AMS/STAC Committee on Southern Hemisphere Meteorology and Oceanography.
- 2006 Co-Chair of the 8th AMS 8th International Conference on Southern Hemisphere Meteorology and Oceanography of the American Meteorological Society. Foz do Iguacú, 24-28 April, 2006.
- 2006-2010 Vice-Dean of the School of Exact and Natural Sciences of the University of Buenos Aires.
- 2007-2012 Officer Member of the Joint Scientific Committee of the World Climate Research Program (WCRP) sponsored by WMO, ICSU and IOC.
- 2007-Present Member of the Scientific Advisory Committee (SAC) of the Inter-American Institute for Global Change Research (IAI).
- 2009-2011 Lead Author of the IPCC Special Report on "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" (SREX).
- 2011 Member of the Organizing Committee of WCRP Open Science Conference, Denver 24-28 October, 2011.

Research Grants Awarded (most relevant):

- “Enhancement of The Daily Rainfall Network In Support Of The South American Low-Level Jet Study”. NOAA/GC02-032. FY02-04. Co-PI.
- "Local and Remote Influences on Rainfall Variations and extreme events in la Plata Basin". NOAA/GC03-011. FY03-05. Co-PI.
- “A Europe-South America Network for Climate Change Assessment and Impact Studies” CLARIS, EU-Contract 001454 (GOCE). FY05-07. Co-PI.
- “Intraseasonal Variability of South America Precipitation. NOAA/GC07-134. FY08-10. PI.
- “Experimental High Resolution Seasonal Climate and Hydrologic Prediction and Predictability Studies of the

- Pan-American and South American Monsoons from Intra-Seasonal to Seasonal Scales” NOAA/GC07-133. FY08-10. Co-PI
- “A Europe-South America Network for Climate Change Assessment and Impact Studies in La Plata Basin”. EU-Contract FP7-ENV-2007-1/No. 212492. FY08-11. Co-PI
- “Influence of Convective Systems on Intraseasonal to Interannual Variability of the Intra-American Monsoon”. NOAA-CPPA- Período: 2010-2013. Co-PI.
- “Decadal Variability of the American Monsoons: An Assessment of CMIP5 Simulations”. NSF-RAPID (AGS-11126804) FY11-12. Co-PI.
- “Decadal climate variability and change and its hydrological impacts over southeastern South America”. CNRS/INSU/LEFE FY: 12. PI
- “Pronósticos probabilísticos a diversos plazos: generación de productos específicos para su implementación operativa en Argentina”. ANPCyT-PICT-Bicentenario (Argentina National Research Agency). FY11-14. Co-PI.

Academic Activities:

4 PhD students currently advising, 9 MS students and 8 PhD students completed the program. Advisor of research training activities of Ecole Polytechnique students: 3 completed.

Awards:

2012 “Emilio Caimi” Prize to Scientific Trajectory, Centro Argentino de Meteorólogos.

Conferences (more relevant and recent ones)

- “Regional analysis of future climate projections”. Invited speaker. UNFCCC/SBSTA 26/ESSP SIDE EVENT: Connecting Earth System Science Research to Climate Change Policy, Bonn, Germany, 7 May 2007
- “Needs assessment for climate information on decadal time scales and longer”. Invited Speaker. 3rd World Climate Conference (WCC-3), Ginebra, 30 de Agosto – 4 Septiembre 2009. Introduction to Section D: Future Climate Extremes, Impacts, and Disaster Losses”. IPCC-SREX Report Approval Session, Kampala, Uganda, 14-17 Nov. 2011.
- ‘Regional observations and projections of extremes’ Outreach event on ‘Managing the Risks of Climate Extremes and Disasters in Latin America – What can we learn from the IPCC Special Report?’ Havana, Cuba, 18th-19th April 2012.
- “Climate Change Science Update”. Forum on Science, Technology and Innovation for Sustainable Development, organized by ICSU for RIO+20, Rio de Janeiro, Brazil, 11-15 June 2012
- “Coping with Climate Change”. IAP Conference and General Assembly. Rio de Janeiro, Brasil, 24 – 27 February 2013.