

CURRICULUM VITAE

ERNESTO HUGO BERBERY

Earth System Science Interdisciplinary Center/Cooperative Institute for Climate and Satellites
 5825 University Research Court, Suite 4001
 College Park, MD 20740-3823

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1. PERSONAL INFORMATION

Name Ernesto Hugo Berbery

Affiliation Earth System Science Interdisciplinary Center/AOSC
University of Maryland

Rank Research Professor

Year of first appointment 1992

Education

- Licentiate in Meteorological Sciences, 1976, University of Buenos Aires, Argentina.
- Doctor in Meteorological Sciences, 1987, University of Buenos Aires, Argentina.

Areas of interest

- Regional hydroclimate variability; Monsoon systems; Land surface-atmosphere interactions.

Researcher ID (ISI Web of Science): F-4560-2010; ORCID: 0000-0003-2587-3345
h-index: 24; (Google Scholar: h-index: 30)

Employment (listing the US only)

10/2016 - present Deputy Director, Cooperative Institute for Climate and Satellites (CICS/ESSIC), University of Maryland.

07/2012 - present Director, Cooperative Institute for Climate and Satellites-Maryland (CICS-MD/ESSIC), University of Maryland.

07/2011 - present Research Professor, Earth System Science Interdisciplinary Center (ESSIC) and affiliated to the Dept. of Atmospheric and Oceanic Science, University of Maryland.

07/2011 – 6/2012 Associate Director, Cooperative Institute for Climate and Satellites-Maryland (CICS-MD/ESSIC), University of Maryland.

04/2005 – 07/2011 Research Professor, Department of Atmos. & Oce. Science (AOSC), University of Maryland.

06/2003 – 03/2005 Associate Research Professor, Dept. of Meteorology, Univ. of Maryland.

03/2000 - 05/2003 Associate Research Scientist, Dept. of Meteorology, Univ. of Maryland.

07/1994 - 03/2000 Assistant Research Scientist, Dept. of Meteorology, Univ. of Maryland.

08/1992 - 07/1994 Research Associate, Department of Meteorology, University of Maryland.

Teaching Positions (selected)

Spring 2001 Instructor of General Circulation of the Atmosphere (METO 617), University of Maryland.

07/1996 - present Adjunct Member of the Graduate Faculty, University of Maryland.

03/1986 - 12/1994 Assistant Professor, Department of Meteorology (currently Atmospheric and Oceanic Sciences), University of Buenos Aires.

3/86 12/94 Assistant Professor (senior level), Department of Meteorology (currently Atmospheric and Oceanic Sciences), University of Buenos Aires.

9/77 2/86 Assistant Professor (junior level), Department of Meteorology, University of Buenos Aires.

7/76 12/77 Assistant Professor (*Profesor Adjunto*), *Universidad Nacional de La Plata*, Argentina.

Awards and Honors

- 2016 *Premio Raíces* (Roots Award). Given by the Argentine Government for International Cooperation
- 2011 Elected Fellow of the American Meteorological Society.
- 2009 Vice President of the 10th Argentine Congress of Meteorology.
- 2001 Life Member of the Argentine Center of Meteorologists.
- 1990 Reentry Grant from *Fundación Antorchas* (Buenos Aires, Argentina). This grant was awarded through a competitive selection to researchers returning to Argentina after working in a foreign country.
- 1987 Fellowship of the National Council of Research and Development (CONICET), Argentina, to perform post-doctoral research at the Department of Meteorology, University of Utah.
- 1987 Best paper of the 5th Argentine Meteorological Congress (Nov 30-Dec 4, 1987, Buenos Aires, Argentina) for the paper: *The generation of stationary waves by the Southern Hemisphere topography*.

Honorary Positions

- 2016- pres. **Visiting Professor** at the Universidad Nacional del Litoral (Argentina)
- 2007-pres. **Corresponding Researcher**, National Council of Scientific Research and Development (CONICET), Argentina. [This recognition is awarded to scientists that contribute to the development of science research in Argentina.]
- 2003 **Visiting Associate Professor**, University of Buenos Aires.
- 1994-pres. **Advisor**, Center for Research of the Atmosphere and the Oceans (CIMA, Arg.).
- 2000-pres. **Advisor**, College of Engineering and Hydrological Sciences of the *Universidad Nacional del Litoral*, Santa Fe, Argentina.

2. PUBLICATIONS AND RESEARCH ACTIVITIES**2.1 Books**

JASMIN: Joint Assessment of Soil Moisture Indicators, JASMIN, for southeastern South America. Basualdo, A., E. H. Berbery, and C. Hidalgo, eds. 1st ed. - Ciudad Autónoma de Buenos Aires: Editorial Facultad de Agronomía, 2017. ISBN 978-987-3738-11-1

2.2 Book chapters

- Berbery, E. H., O. V. Müller, and L. Sgroi, 2017: A system for forecasting and monitoring of surface variables. In Joint Assessment of Soil Moisture Indicators, JASMIN, for southeastern South America, Editorial Facultad de Agronomía. 51-56.
- Alcaraz-Segura D., E.H. Berbery, O. V. Müller, J. M. Paruelo, 2013: Characterizing and Monitoring Climate Regulation Services. In: Alcaraz-Segura D, Di Bella C, Straschnoy J (eds). *Earth Observation of Ecosystem Services*. CRC Press - Taylor and Francis Group, 351-378.
- Oki, T., Blyth, E., E. H. Berbery, and D. Alcaraz-Segura, 2013: Land Cover and Land Use Changes and their Impacts on Hydroclimate, Ecosystems and Society, *Climate Science for Serving Society: Research, Modelling and Prediction Priorities*. G. R. Asrar and J. W. Hurrell, Eds. *Springer*, DOI 10.1007/978-94-007-6692-1_7.
- Gochis, D. J., and E. H. Berbery, 2011: Contribution from the North American Monsoon Experiment towards improved understanding and prediction of high impact weather and climate events, Chapter 10 in *The Global Monsoon System: Research and Forecast, 2nd Edition*, C. P. Chang, Y. Ding, N.-C. Lau, R. Johnson, B. Wang, and T. Yasunari, Eds., World Scientific Series on Asia-Pacific Weather and Climate, Vol. 5, World Scientific Publications Company, 608 pp, April 2011.
- Caffera, R. M., and E. H. Berbery, 2006: Chapter 2, La Plata Basin Climatology. In *Climate Change in La Plata Basin*. V. R. Barros, R. Clarke, and P. Silva Dias, Eds. CIMA – CONICET/UBA, ISBN 950-692-066-4, 19-38.

Berbery, E. H., M. Doyle, and V. R. Barros, 2006: Chapter 5, Regional precipitation trends. In *Climate Change in La Plata Basin*. V. R. Barros, R. Clarke, and P. Silva Dias, Eds. CIMA – CONICET/UBA, ISBN 950-692-066-4, 67-79.

Menendez, A., and E. H. Berbery, 2006: Chapter 6, Hydrological trends. In *Climate Change in La Plata Basin*. V. R. Barros, R. Clarke, and P. Silva Dias, Eds. CIMA – CONICET/UBA, ISBN 950-692-066-4, 81-92.

2.3 Articles in Refereed Journals

Solid Underline: Graduate student (advised or co-advised)

Dashed underline: Postdoctoral researcher

- (53) Lukens, K. E., **E. H. Berbery**, 2019: Winter Storm Tracks and Related Weather in the NCEP Climate Forecast System Weeks 3-4 Reforecasts for North America. *Wea. Forecasting*, in press.
- (52) Lovino M. A., O. V. Müller, E. H. Berbery, and G. Müller, 2018: How have daily climate extremes changed in the recent past over northeastern Argentina? *Global and Planetary Change*, 168, 78-97.
- (51) Lukens, K. E., E. H. Berbery, and K. Hodges, 2018: The Imprint of Severe Storm Tracks on High Impact Winter Weather in North America. *J. Climate*, **31**, 2057-2074.
- (50) Lovino M. A., O. V. Müller, E. H. Berbery, and G. Müller, 2018: Evaluation of CMIP5 historical and present climate simulations in the core crop region of Argentina. *Int. J. Climatology*, 1158-1175.
- (49) Müller, O. V., M. A. Lovino, and E. H. Berbery, 2016: Evaluation of WRF model forecasts and their use for hydroclimate monitoring over southern South America *Wea. Forecasting*, **31**, 1001-1017.
- (48) Schubert, S., R. Stewart, H. Wang, M. Barlow, H. Berbery, W. Cai, M. Hoerling, K. Kanikicharla, R. Koster, B. Lyon, A. Mariotti¹, C. R. Mechoso, O. Müller, B. Rodriguez-Fonseca, R. Seager, S.I. Senviratne, L. Zhang, T. Zhou, 2016: Global Meteorological Drought: A Synthesis of Current Understanding with a Focus on SST Drivers of Precipitation Deficits. *J. Climate*, **29**, 3989-4019.
- (47) Sanchez, E., S. A. Solman, A. R. C. Remedio, E. H. Berbery, and coauthors, 2015: Regional climate Modelling in CLARIS-LPB: A concerted approach towards XXIst century projections of regional temperature and precipitation over South America. *Climate Dyn.*, **45**, 2193–2212.
- (46) Sörensson, A. A., and E. H. Berbery, 2015: A note on soil moisture memory and interactions with surface climate for different vegetation types in the La Plata Basin. *J. Hydrometeor.*, **16**, 716-729.
- (45) Müller, O. V., E. H. Berbery, D. Alcaraz-Segura, and M. Ek, 2014: Regional model simulations of the 2008 drought in southern South America using a consistent set of land surface properties. *J. Climate*, **27**, 6754-6778.
- (44) Lee, S.-J., E. H. Berbery, and D. Alcaraz-Segura, 2013: The Impact of Ecosystem Functional Type Changes on the Climate of the La Plata Basin. *Adv. Atmos. Sci.*, **30**, 1387-1405.
- (43) Lee, S.-J., E. H. Berbery, and D. Alcaraz-Segura, 2013: Effects of Implementing Ecosystem Functional Type Data in a Mesoscale Climate Model. *Adv. Atmos. Sci.*, **30**, 1373-1386.
- (42) Solman, S. A., and coauthors (including E. H. Berbery), 2013: Evaluation of an ensemble of regional climate model simulations over South America driven by the ERA-Interim reanalysis: Model performance and uncertainties. *Climate Dyn.*, **41**, 1139-1157.
- (41) Lee, S.-J., and E. H. Berbery, 2012: Land Cover Change Effects on the Climate of the La Plata Basin. *J. Hydrometeor.*, **13**, 84-102.
- (40) Marengo, J., and coauthors (including E. H. Berbery), 2012: Recent developments on the South American Monsoon System. *Int. J. Climatology*, DOI: 10.1002/joc.2254.
- (39) Becker, E. J., E. H. Berbery, and R. W. Higgins, 2011: Modulation of cold season U.S. daily precipitation by the Madden-Julian Oscillation. *J. Climate*, **24**, 5157-5166, doi: 10.1175/2011JCLI4018.1.

- (38) Mo, K., and E. H. Berbery, 2011: Drought and Persistent Wet Spells over South America based on Observations and the U. S. CLIVAR Drought experiments. *J. Climate*, **24**, 1801-1820.
- (37) Becker, E. J., E. H. Berbery, and R. W. Higgins, 2009: Understanding the Characteristics of Daily Precipitation over the United States using the North American Regional Reanalysis. *J. Climate*, **22**, 6268-6286.
- (36) Berbery, E. H., H. C. Ciappesoni, and E. Kalnay, 2008: The smoke episode in Buenos Aires, 15-20 April 2008, *Geophys. Res. Lett.*, **35**, L21801, doi:10.1029/2008GL035278.
- (35) Becker, E. J., and E. H. Berbery, 2008: Model simulation of the diurnal cycle and moist surges along the Gulf of California during NAME. *J. Climate*, **21**, 771-787.
- (34) Collini, E. A., E. H. Berbery, V. Barros, and M. Pyle, 2008: How Does Soil Moisture Influence the Early Stages of the South American Monsoon? *J. Climate*, **21**, 195-213.
- (33) Luo, Y., E. H. Berbery, K. E. Mitchell, and A. K. Betts, 2007: Relationships between land surface and near-surface atmospheric variables in the NCEP North American Regional Reanalysis. *J. Hydrometeor.*, **8**, 1184-1203.
- (32) Silva, V. B. S., and E. H. Berbery, 2006: Intense rainfall events affecting the La Plata basin. *J. Hydrometeor.*, **7**, 769-787.
- (31) Mesinger, F., and coauthors (including E. H. Berbery) 2006: North American Regional Reanalysis. *Bull. Amer. Meteor. Soc.*, **87**, 343-360.
- (30) Higgins, R. W., D. Ahijevych, J. Amador, A. Barros, E. H. Berbery, and coauthors: 2006: The NAME 2004 field campaign and modeling strategy. *Bull. Amer. Meteor. Soc.*, **87**, 79-94.
- (29) Luo, Y., E. H. Berbery, and K. E. Mitchell, 2005: The operational Eta model precipitation and surface hydrologic cycle of the Columbia and Colorado basins. *J. Hydrometeor.*, **6**, 341-370.
- (28) Fox-Rabinovitz, M. S., E. H. Berbery, L. L. Takacs and R. C. Govindaraju, 2005: A multiyear ensemble simulation of the U.S. climate with a stretched-grid GCM. *Mon. Wea. Rev.*, **133**, 2505-2525.
- (27) Mo, K. C., and E. H. Berbery, 2004: Low-level jets and the summer precipitation regimes over North America, *J. Geophys. Res.*, **109**, D6, D06117, doi:10.1029/2003JD004106.
- (26) Berbery, E. H., Y. Luo, K. Mitchell, and A. K. Betts, 2003: Eta model-estimated land surface processes and the hydrologic cycle of the Mississippi basin. *J. Geophys. Res.*, **108**, D22, 8852, doi:10.1029/2002JD003192.
- (25) Roads, J., R. Lawford, E. Bainto, E. H. Berbery, and coauthors, 2003: GCIP Water and Energy Budget Synthesis (WEBS). *J. Geophys. Res.*, **108**, D16, 8609, doi:10.1029/2002JD002583.
- (24) Berbery, E. H., and M. S. Fox-Rabinovitz, 2003: Multiscale diagnosis of the North American monsoon system using a variable resolution GCM. *J. Climate*, **16**, 1929-1947.
- (23) Nogués-Paegle, J., C. R. Mechoso, R. Fu, E. H. Berbery, and coauthors, 2002: Progress in Pan American CLIVAR research: Understanding the South American monsoon. *Meteorologica*, **27**, 3-32.
- (22) Higgins, R. W., A. Douglas, A. N. Hahmann, E. H. Berbery, and coauthors, 2002: Progress in Pan American CLIVAR research: The North American monsoon system. *Atmosfera*, **16**, 29-65.
- (21) Berbery, E. H., and V. R. Barros, 2002: The hydrologic cycle of the La Plata basin in South America. *J. Hydrometeor.*, **3**, 630-645.
- (20) Vera, C. S., P. K. Vigiariolo and E. H. Berbery, 2002: Cold season synoptic scale waves over subtropical South America. *Mon. Wea. Rev.*, **130**, 684-699.
- (19) Barlow, M., S. Nigam, and E. H. Berbery, 2001: ENSO, Pacific Decadal Variability, and U.S. Summertime Precipitation, Drought, and Stream Flow. *J. Climate*, **14**, 2105-2128.
- (18) Berbery, E. H., 2001: Mesoscale moisture analysis of the North American monsoon. *J. Climate*, **14**, 121-137.

- (17) Berbery, E. H., and E. A. Collini, 2000: Springtime precipitation and water vapor flux over subtropical South America. *Mon. Wea. Rev.*, **128**, 1328-1346.
- (16) Nigam, S., M. Barlow, and E. H. Berbery, 1999: Analysis links Pacific decadal variability to drought and streamflow in United States, *Eos Trans. AGU*, 80(51), 621-632, doi:10.1029/99EO00412.
- (15) Berbery, E. H., and E. M. Rasmusson, 1999: Mississippi moisture budgets on regional scales. *Mon. Wea. Rev.*, **127**, 2654-2673.
- (14) Berbery, E. H., K. E. Mitchell, S. Benjamin, T. Smirnova, H. Ritchie, R. Hogue, and E. Radeva, 1999: Assessment of land surface energy budgets from regional and global models. *J. Geophys. Res.*, **104**, D16, 19,329-19,348.
- (13) Yarosh, E. S., C. F. Ropelewski, and E. H. Berbery, 1999: Biases of the observed atmospheric water budgets over the central United States. *J. Geophys. Res.*, **104**, D16, 19,349-19,360.
- (12) Barlow, M., S. Nigam, and E. H. Berbery 1998: Evolution of the North American Monsoon System. *J. Climate*, **11**, 2238-2257.
- (11) Berbery, E. H., E. M. Rasmusson, and K. E. Mitchell, 1996: Studies of North American continental-scale hydrology using Eta model forecast products. *J. Geophys. Res.*, **101**, D3, 7305-7319.
- (10) Berbery, E. H., and C. S. Vera, 1996: Characteristics of the Southern Hemisphere winter storm track with filtered and unfiltered data. *J. Atmos. Sci.*, **53**, 468-481.
- (9) Berbery, E. H., and J. Nogués-Paegle, 1993: Intraseasonal interactions between the tropics and extratropics in the Southern Hemisphere. *J. Atmos. Sci.*, **50**, 1950-1965.
- (8) Berbery, E. H., 1993: Southern Hemisphere statistics at 200 hPa using 10 years of ECMWF analyses (in Spanish). *Meteorologica*, **18**, 13-22.
- (7) Berbery, E. H., J. Nogués-Paegle, and J. Horel, 1992: Wavelike Southern Hemisphere extratropical teleconnections. *J. Atmos. Sci.*, **49**, 155-177.
- (6) Berbery, E. H., and M. N. Núñez, 1989: An observational and numerical study of blocking episodes near South America. *J. Climate*, **2**, 1352-1361.
- (5) Berbery, E. H., 1989: Influence of orographic forcing upon the Southern Hemisphere stationary waves. Part 2: A comparison to observations (in Spanish). *Meteorologica*, **17**, 1-10.
- (4) Berbery, E. H., 1988: Influence of orographic forcing upon the Southern Hemisphere stationary waves. Part 1: Model and types of orography (in Spanish). *Meteorologica*, **16**, 11-20.
- (3) Berbery, E. H., 1984: Reflectivity-rainfall rate (Z-R) relationships resulting from different theoretical and experimental criteria (in Spanish). *Geoacta*, **12**, 109-120.
- (2) Berbery, E. H., and A. Brizuela, 1982: Influence of anomalous wave propagation on radar observations (in Spanish). *Geoacta*, **11**, 91-105.
- (1) Berbery, E. H., 1983: Z-R relationships resulting from a variant of the Direct Method (in Spanish). *Meteorologica*, **14**, No 1 and 2.

2.4 Articles in Newsletters

- Grimm, A. M., I.F.A. Cavalcanti and E. H. Berbery, 2015: The South American Monsoon. *CLIVAR Exchanges*, **19**, No 1, 6-9.
- Podestá, G., C. Hidalgo, E. H. Berbery, 2013: Towards usable climate science: research supporting provision of regional climate services. *CLIVAR Exchanges*, **18**, No 3, 28-33.
- Berbery, E. H., J. P. Boulanger and C. Ereño, 2011: Editorial for LPB special issue of *CLIVAR Exchanges*, **16**, No 3.
- Lee, S.-J. and E. H. Berbery, 2011: Land cover changes and their effect on the climate of La Plata basin.

CLIVAR Exchanges, **16**, No 3, 2-4.

- Berbery, E. H., D. L. Herdies, D. Alcaraz-Segura, L.G. G. de Gonçalves, D. P. Lettenmaier, D. Toll, 2011: The International Summer School on Land Cover Change and Hydroclimate of the La Plata Basin, *CLIVAR Exchanges*, **16**, No 3, 5-6.
- Solman, S., E. Sanchez, P. Samuelson, E. H. Berbery, A. Recca Remedio, R. da Rocha, S. Chou, and L. Li, 2011: CLARIS LPB WP5: Regional Climate Change assessments for La Plata Basin. *CLIVAR Exchanges*, **16**, No 3, 19-21.
- Alcaraz-Segura, D., E. H. Berbery, S.-J. Lee, and J. Paruelo, 2011: Use of Ecosystem Functional Types to represent the interannual variability of vegetation biophysical properties in regional models. *VAMOS Newsletter*, **7**, 15-19.
- Berbery, E. H., J. Marengo, C. Ereño, and members of the VAMOS Panel, 2010: Variability of the American Monsoon System (VAMOS) Panel Activity Report. *CLIVAR Exchanges*, **15**, No 4, 18-19.
- Berbery, E. H., J. Marengo, and C. Ereño, 2009: Variability of the American Monsoon System (VAMOS) Panel Activity Report. *CLIVAR Exchanges*, **14**, No 2 and 3, 13-14.
- Berbery E. H., and M. A. Silva Dias, 2006: First Meeting of the LPB Science and Implementation Steering Group, 18–19 September 2006, Guaratinguetá, Brazil. *GEWEX News*, **16**, No 4.
- Roads, J., and coauthors (including E. H. Berbery), 2006: Data sets from the Continental-Scale Experiments. *GEWEX News*, **16**, No 3.
- Paegle, J., T. Ambrizzi, E. H. Berbery, and coauthors, 2004: Modeling Studies Related to SALLJEX. *CLIVAR Exchanges*, **9**, No 1.
- Berbery, E. H., E. A. Collini, V. Silva, M. Peña, D. P. Lettenmaier, V. Barros, M. Pyle, 2004: The water cycle of La Plata basin at regional scales. *GEWEX News*, **14**, No 1.
- Lau, W., J. Matsumoto, M. Bollasina, and E. H. Berbery, 2004: Diurnal variability in the monsoon region: Preliminary results from the CEOP Inter-Monsoon Studies. *CEOP Newsletter*, No 5.
- Berbery, E. H., and C. R. Mechoso, 2000: The hydrologic cycle of the Rio de la Plata basin. *CLIVAR Exchanges*, **5**, No 2, 9-11.
- Nogués-Paegle, J., and E. H. Berbery, 2000: Low-Level Jets over the Americas. *CLIVAR Exchanges*, **5**, No 2, 6-8.
- Berbery, E. H., K. Mitchell, S. Benjamin, T. Smirnova, H. Ritchie, R. Hogue, and E. Radeva, 1998: Assessment of surface heat fluxes from regional models. *GEWEX News*, **8**, No 3.
- Mitchell, K., T. Black, E. Rogers, C. Peters, Z. Janjic, Y. Xue, C. Ropelewski, J. Horel, A. Vernekar, F. Baer, C. Nobre, and E. H. Berbery, 1996: GCIP Improvements to Eta model benefit studies World Wide. *GEWEX News*, **6**, No 2.

2.5 Contributions to Programmatic Documents

- 2011:** Contributed to the TRACE prospectus and draft of the white paper.
- 2007:** Contributed to the CEOP Science and Implementation Plan.
- 2006:** **Lead author** of the Chapter “Climate Predictability on Intraseasonal to Interannual Time Scales” of the CPPA Science and Implementation Plan/NOAA.
- 2005:** **Lead author** and co-editor of the La Plata Basin (LPB) Implementation Plan. <http://www.atmos.umd.edu/~berbery/lpb/>
- 2004:** **Co-author** of the North American Monsoon Experiment Science and Implementation Plan. (revision). http://www.eol.ucar.edu/projects/name/documentation/NAME_sci_impl.pdf
- 2003:** **Co-author.** GCIP Water and Energy Budget Synthesis (WEBS). <http://ecpc.ucsd.edu/gcip/webs.htm>

- 2001: Co-author** of the North American Monsoon Experiment Science and Implementation Plan.
- 2001: Co-author** and **co-editor** of the document VAMOS document “Climatology and Hydrology of the La Plata Basin”. http://www.clivar.org/publications/wg_reports/vamos/pdf_files/laplata.pdf. Also available at <http://www.atmos.umd.edu/~berbery/laplata/index.html>
- 2000: Co-author** of “Modeling in NAME” v1.0.
- 2000: Co-author** of the American Low Level Jets (ALLS) A Scientific Prospectus and Implementation Plan. <http://www.met.utah.edu/jnpaegle/research/ALLS.html>

2.6 Talks and other professional papers presented.

i. Keynote speaker

- Berbery, E. H.**, 2014: Land cover change effects on South American regional climate. **Ninth International Congress of the Spanish Association of Climatology**, Almeria, Spain, 28-30 October 2014.
- Berbery, E. H.**, K. Mo, O. Müller, and L. Sgroi, 2014: Large-Scale Dynamics and Regional Processes Affecting Droughts in Central Argentina. **Second Int’l Congress of Hydrology of Plains**, Santa Fe, Argentina, 23-26 September 2014.
- Berbery, E. H.**, K. Mo and O. V. Müller, 2013: Droughts in Southern South America: Large-Scale Dynamics and Regional Processes. **Joint Conference of the 11th AsiaFlux Int’l Workshop, the 3rd HESSS, and 14th Annual Meeting of KSAFM “Communicating Science to Society: Coping with Climate Extremes for Resilient Ecological-Societal Systems”**, Seoul, Korea, 21-24 August 2013.
- Berbery, E. H.**, 2008: The La Plata Basin (LPB) Program. **XV Congresso Brasileiro de Meteorologia**, Sao Paulo, Brazil, Aug 2008.

ii. Invited talks

- Berbery, E. H.**, and co-authors, 2016: Soil Moisture, Soils and Land Cover Effects on Regional Climate (Southern South America). **The GEWEX-SoilWat initiative: first planning workshop for scope and interactions Advancing Integration of Soil and Subsurface Processes in Climate Models**, Leipzig, Germany, June 28-30, 2016
- Berbery, E. H.**, 2012: Model Simulations of the Evolution and Variability of the South American Monsoon System (SAMS). **10th Int’l Conference on Southern Hemisphere Meteorology and Oceanography**, Nouméa, New Caledonia, Apr 2012.
- Berbery, E. H.**, K. Mo, and O. Müller, 2011: On the remote and regional forcings of extreme events in southern South America. *Session GC34 Weather and Climate Extremes in the Americas*. **American Geophysical Union Fall Meeting**, San Francisco, CA, Dec. 2011.
- Berbery, E. H.**, D. Alcaraz-Segura, S.-J. Lee, O. V. Müller, 2011: The effect of the surface conditions on extreme events: regional model simulations using Ecosystem Functional Types. **WCRP (GEWEX/CLIVAR) Workshop on Drought Predictability and Prediction in a Changing Climate: Assessing Current Capabilities, User Requirements and Research Priorities**. Barcelona, Spain, March 2011.
- Berbery, E. H.**, and E. Gentile, 2010: Regional Hydroclimate Projects as practical tools for the development of Climate Change Policies. **Regional Policy Dialogue Workshop for Latin America and the Caribbean**. Mexico City, Mexico, June 2010.
- Berbery, E. H.**, 2007: The hydrologic cycle: An evolving view following the steps of Gene Rasmusson. *Eugene Rasmusson Symposium*, **American Meteorological Society Annual Meeting**, San Antonio, TX, Jan 2007.
- Berbery, E. H.**, and E. A. Collini, 2006: How does soil moisture influence the onset of the South American

Monsoon? *Dynamical Regional Climate Modeling Session of the 2006 Joint Assembly of the American Geophysical Union*, Baltimore, MD, May 2006.

- Berbery, E. H.**, Y. Luo, K. E. Mitchell, A. K. Betts, 2006: Land-atmosphere interactions on North American basins estimated from North American Regional Reanalysis products. *Joint session of the 18th Conference on Climate Variability and Change and the 20th Conference on Hydrology, American Meteorological Society Annual Meeting*, Atlanta, GA, Jan. 2006.
- Berbery, E. H.**, E. Collini, J. S. Paek and M. Pyle, 2002: Mesoscale Diagnosis and Simulation of the South American Monsoon System. *Regional Climate Modeling Session of the 2002 American Geophysical Union*, San Francisco, CA, Dec. 2002.
- Rasmusson, E. M., **E. H. Berbery**, C. F. Ropelewski and E. S. Yarosh, 1996: An integrated strategy for the evaluation of GCIP continental-scale land/atmosphere moisture budgets. **Second Int'l Scientific Conference on the Global Energy and Water Cycle**, Washington, DC, June 1996.

iii. Other talks by invitation (a few selected after 1997)

- Berbery, E. H.**, 2008: La Plata Basin (LPB) Project. *20th Session of the Scientific Steering Group (SSG) of the Global Energy and Water Cycle Experiment (GEWEX)*. Buenos Aires, Argentina, Feb 5-0, 2008.
- Berbery E. H.**, 2006: Research findings using North America Regional Reanalysis. *First CPPA Principal Investigators Meeting*. Tucson, AZ, August 2006.
- Berbery, E. H.**, 2006: The chapter two on Climate Predictability in of draft CPPA Science & Implementation Plan. *First CPPA Principal Investigators Meeting*. Tucson, AZ, August 2006.
- Berbery E. H.**, 2005: Hydrometeorological Modeling in the South American Monsoon System. *Eighth Annual Meeting of the WCRP/CLIVAR/VAMOS Panel (VPM8)*, Mexico City, Mexico, March 2005.
- Berbery E. H.**, E. Collini, and V. Silva, 2003: The American Monsoons and their role in the water cycle. *U.S. CLIVAR Pan American Workshop*, September 16-18, 2003
- Berbery, E. H.**, and P. Silva Dias, 2001: The Monsoon Experiment South America (MESA), *VAMOS Panel Meeting 4*, Montevideo, Mar. 2001.
- Berbery, E. H.**, 2000: The Río de la Plata basin. Workshop on the *GEWEX Coordinated Enhanced Observing Period (CEOP) 2001-2002*, Honolulu, Hawaii, Jan. 2000.
- Berbery, E. H.**, 1999: The South American monsoon and hydrological processes in *Cuenca del Plata*. *GEWEX Hydrometeorology Panel (GHP) Workshop on synthesis of water and energy budgets*, Hamburg, Germany, Sep. 1999.
- Berbery, E. H.**, 1998: Diagnostic studies using products of regional models. *Workshop on the user requirements of a regional reanalysis*. Univ. of Oklahoma, Feb. 1998.

iv. Selected Articles in Conference Proceedings

- Bracalenti, A., O. Muller and **E. H. Berbery**, 2017: Remote effects of land use changes on southeastern South American climate (in Spanish). XXVIII Reunión Científica de la Asociación Argentina de Geofísicos y Geodestas, La Plata, Argentina.
- Müller O., **E. H. Berbery**, 2014. Routine Forecasting and Monitoring System for Agricultural and Hydrological Applications on La Plata Basin, 2° Congreso Internacional de Hidrología de Llanuras, Santa Fe, Argentina.
- Sgroi, L. C., **E. H. Berbery**, 2014. Caracterización regional de sequías en la zona núcleo de cultivos de la República Argentina. 2° Congreso Internacional de Hidrología de Llanuras, 8 pp.

- Quadro, M., **E. H. Berbery**, M. A. F. Silva Dias, D. L. Herdies, and L. G. G. Gonçalves, 2013: The atmospheric water cycle over South America as seen in the new generation of global reanalyses. *AIP Conf. Proc.* 1531, 732 (2013); doi: 10.1063/1.4804874.
- Nogués-Paegle, J., **E. H. Berbery**, E. A. Collini, A. C. Saulo, 2006: An evaluation of the ETA model during SALLJEX. Proceedings of the *8th Conference on Southern Meteorology and Oceanography*, Foz do Iguassu, April 2006.
- Collini, E. A., **E. H. Berbery**, and V. Barros, 2006: Seasonal dependence of surface-atmosphere interactions for subtropical South America, Proceedings of the *8th Conference on Southern Meteorology and Oceanography*, Foz do Iguassu, April 2006.
- Collini, E. A., **E. H. Berbery**, and V. Barros, 2005: La influencia del estado del suelo en la precipitación del Monzón de Sudamérica, *IX Congreso Argentino de Meteorología (CONGREMET IX)*, Buenos Aires, Oct. 2005.
- Collini, E. A., and **E. H. Berbery**, 2000: Evaluation of the National Centers for Environmental Prediction Eta model for South America. Proceedings of the *6th Conference on Southern Meteorology and Oceanography*. Santiago, Chile, Apr. 2000.
- Berbery, E. H.**, and E. A. Collini, 1999: Warm season moisture transports over South America estimated from Eta model forecasts. Proceedings of the *10th Symposium on Global Change Studies*. Dallas, TX, Jan. 1999.
- Berbery, E. H.**, and E. M. Rasmusson, 1997: Mesoscale moisture analysis of the North American Monsoon. Proceedings of the *22nd Climate Diagnostics Workshop*, Berkeley, CA, Oct. 1997.
- Barlow, M. S. Nigam, and **E. H. Berbery**, 1997: Linear dynamics in the North American Monsoon System. Proceedings of the *22nd Climate Diagnostics Workshop*, Berkeley, CA, Oct. 1997.
- Collini, E. A., **E. H. Berbery**, and E. Rogers, 1997: Applications of the Eta model to the South American region. Proceedings of the *5th Int'l Conference on Southern Hemisphere Meteorology and Oceanography*, Apr. 1997, Pretoria, South Africa.
- Yarosh, E. S. C. F. Ropelewski, and **E. H. Berbery**, 1997: Observed water budgets over the GCIP domain: role of diurnal variability and spatial resolution. Proceedings of the *13th Conference on Hydrology*, Long Beach, CA, Jan. 28-Feb. 2, 1997.
- Barlow, M., **E. H. Berbery**, S. Nigam, and E. Rasmusson, 1997: The climatological large scale structure of the Mexican Monsoon and its relationship to the large scale circulation. Proceedings of the *7th Conference on Climate Variations*, Long Beach, CA, Jan. 28-Feb. 2, 1997.
- Vera C. S., and **E. H. Berbery**, 1997: Features of the Southern Hemisphere winter storm track near the Andes Mountains. Proceedings of the *7th Conference on Climate Variations*, Long Beach, CA, Jan. 28-Feb. 2, 1997.

v. Number of contributed talks/posters (since 2000)

About 10 per year on average.

vi. Invited Seminars (since 1990)

- | | |
|-----------|--|
| Nov. 2016 | Climate Extremes and the role of Land Surface on Regional Climate. Universidad Nacional del Litoral (Santa Fe, Argentina). |
| Aug. 2010 | Land Cover/Land Use Changes and Their Impact on Regional Climate. Universidad Nacional del Litoral (Santa Fe, Argentina). |
| Apr. 2010 | Modeling Land Cover/Land Use Changes and Their Impact on Regional Climate. Department of Atmospheric and Oceanic Science, University of Maryland. |
| Mar. 2008 | The La Plata Basin (LPB) Regional Hydroclimate Project: Opportunities for collaborations between research and operations. National Weather Service, Argentina. |
| Oct. 2007 | The La Plata Basin (LPB) Regional Hydroclimate Project. University of Buenos Aires, Argentina. |

- Nov. 2006 The La Plata Basin (LPB) Experiment in South America. Institut Pierre Simon Laplace, Université Pierre et Marie Curie, Paris, France.
- Aug. 2006 The La Plata Basin (LPB) in South America – A GEWEX/CLIVAR Continental Scale Experiment. Office of Hydrological Development, NOAA.
- May 2006 Modeling and Diagnostic Studies of the North American Monsoon, Duke University.
- Feb. 2006 Land surface-atmosphere interactions in the Americas. Iowa State University.
- Jan. 2003 Eta model-estimated land surface processes and the hydrologic cycle of the Mississippi basin. EMC/NCEP/NOAA.
- Nov. 2002 Mesoscale diagnosis and simulation of the South American Monsoon. Int'l Research Institute for Climate Prediction (IRI).
- Dec. 2000 Studies of the American monsoons using the Eta model and observations. NESDIS/NOAA.
- Feb. 2000 Eta model-based studies of the American Monsoons, National Centers for Environmental Prediction.
- Nov. 1999 Mesoscale circulations in the American Monsoons. Goddard Space Flight Center, NASA
- Apr. 1999 Mesoscale diagnosis of the American Monsoons. Office of Global Programs, NOAA.
- Mar. 1999 Mesoscale moisture analysis of the American Monsoons. Department of Meteorology, University of Maryland.
- May 1997 Mississippi Moisture Budgets. Department of Meteorology, University of Utah.
- Feb. 1995 Studies of North American Continental-scale hydrology using Eta model forecast products. Department of Meteorology, University of Maryland.
- Jul. 1995 Use of Eta model output for continental scale hydrological studies. National Meteorological Center.
- Jan. 1994 Use of the Eta model products to obtain estimates of the water vapor balance components. National Meteorological Center.
- Oct. 1993 Southern Hemisphere teleconnections intraseasonal time scales. Laboratoire de Météorologie Dynamique, France.
- Oct. 1993 South American blocks, persistent anomalies and aspects of synoptic scale fluctuations. Laboratoire de Météorologie Dynamique, France.
- Aug. 1993 Water vapor balances on continental/subcontinental scales. Development Division, National Meteorological Center.
- Apr. 1993 Structure and evolution of Southern Hemisphere extratropical teleconnections. Climate Diagnostics Group, Greenbelt, NASA.
- Feb. 1993 Structure and evolution of Southern Hemisphere extratropical teleconnections. Department of Meteorology, University of Maryland.
- Mar. 1992 Southern Hemisphere intraseasonal oscillations. CADIC-CONICET, Ushuaia, Tierra del Fuego, Argentina.
- Mar. 1992 Extratropical teleconnections and persistent anomalies. Institute of Fluid Mechanics and Environmental Engineering (IMFIA), College of Engineering, Montevideo, Uruguay.
- Mar. 1992 Tropical-extratropical interactions. Institute of Fluid Mechanics and Environmental Engineering (IMFIA), College of Engineering, Montevideo, Uruguay.
- Aug. 1991 The effect of orography upon large scale circulation. College of Engineering, University of La Plata, Argentina.
- Jul. 1991 Tropical-extratropical interactions and teleconnections. Center for Sea and Atmosphere Research, Argentina.
- Dec. 1990 Low frequency events in the atmosphere: Teleconnections and Blocks. Department of Atmospheric Sciences, University of Buenos Aires, Argentina.
- Nov. 1990 Large scale features associated with blocking in South America. Department of Meteorology, University of Utah.

[2.7 Dissemination](#)

Berbery, E. H., 2010: Modeling and Climate Change Projections for South America. *Training Workshop on Climate Change and Water Resources*, Monterrey, Mexico, August 2010.

Berbery, E. H., 2011: Impacts of agriculture on climate. *Science-Policy Forum "Agricultural expansion is creating wealth for nations; is it also destroying the natural resource base for development?"* Asuncion, Paraguay, 7 April 2011.

2.8 Research Grants

Agency	Title	Capacity	Period	Amount
NOAA/ CICS	<i>GOES-R Water Cycle Products and Services to Support the National Weather Service</i>	PI	2016-2018	\$1,152,050
NOAA/ CICS	<i>The imprint of storm tracks on high Impact weather</i>	PI	2013-2018	\$225,862
NOAA/ CICS	<i>Enhancing SCSB Computing Environment</i>	PI	2015	\$50,000
NOAA/ CICS	<i>Progress and Dissemination of CICS-MD Research for JPSS/S-NPP</i>	PI	2011	\$41,000
NOAA	<i>Cooperative Institute for Climate and Satellites</i>	Co-PI	2014-2019	\$93 M
IADB	<i>Hydro-climate Services in La Plata River Basin</i>	Co-PI	2013-2014	\$294,443
IAI	<i>Bridging Ecosystem Services and Territorial Planning (BEST-P): A Southern South American initiative</i>	Co-PI	2013-2018	\$698,995
IAI	<i>Towards usable climate science – Informing sustainable decisions and provision of climate services to the agriculture and water sectors of southeastern South America</i>	Co-PI	2012-2017	\$765,499
NASA	<i>Integrating NASA Earth Sciences Research results into Decision Support Systems for Agriculture and Water Management in South America</i>	PI	2009-2013	\$1,232,370
NOAA	<i>Monitoring and Prediction of Hydroclimate over Pan America based on the Climate Forecast System Reanalysis and Reforecast Products</i>	PI	2009-2013	\$155,999
IAI	<i>The Impact of Land Cover and Land Use Changes on the Hydroclimate of the La Plata Basin</i>	PI	2008-2011	\$679,837
EC	<i>A Europe-South America Network for Climate Change Assessment and Impact Studies in La Plata Basin (CLARIS-LPB)</i>	Co-PI	2008-2012	€ 3.6 M
NASA	<i>Evaluation and assimilation of NASA's remote sensing products in support of science activities in the La Plata basin</i>	PI	2008-2011	\$412,433
NSF	<i>Land-atmosphere interactions and the hydro-climate predictability of the South American Monsoon System</i>	PI	2007-2010	\$404,770
NSF	<i>On the Causes of Recent Trends in Precipitation over La Plata Basin and Their Impact on the Basin's Hydrology</i>	PI	2005-2008	\$192,004
NOAA	<i>Regional diagnosis and predictability of North American land surface-water cycle interactions</i>	PI	2004-2007	\$303,717
NOAA	<i>Regional Climate Data Assimilation System (R-CDAS) and NAME Data Impact and Prediction Experiments</i>	Co-PI	2005-2008	\$132,000
NOAA	<i>Mesoscale diagnosis of the South American monsoon and its linkages to hydrometeorological processes over La Plata basin</i>	PI	2003-2006	\$303,717
NOAA	<i>An Eta model transferability study with applications to the hydrological cycle of the La Plata basin</i>	PI	2001-2005	\$147,967
NSF	<i>Anomalous regional climate event studies with variable resolution stretched grid GCMs</i>	Co-PI	2001-2005	\$497,653
NASA	<i>Climate studies on variability and predictability of the water and energy cycles using a variable resolution</i>	PI	2002-2006	\$388,120

	GCM			
IAI	<i>Development of a collaborative research network for the study of regional climate</i>	Co-PI	1999-2006	~\$20,000 (UMD portion)
NOAA	<i>Variability of the South American monsoon and its linkages to hydrometeorological processes</i>	PI	2000-2004	\$295,760
NOAA	<i>Regional water and energy budgets: The perspective of operational modeling suites and observations</i>	PI	2000-2004	\$404,303
NOAA	<i>Dynamical diagnoses of the precipitation and circulation variability over the Americas</i>	PI	1997-2000	\$316,916
NOAA	<i>Studies of North American continental-scale hydrology using Eta model analysis/forecast products</i>	PI	1997-2000	\$310,000
IAI	<i>Global Change Effects in the Southwestern Atlantic</i>	Co-PI	1996-1998	\$43,530

(IAI: Inter American Institute for Global Change Research.)

2.9 Editorial boards

Associate Editor of *Meteorologica*, 1982-1987. (*Meteorologica* is a magazine edited by the Argentine Center of Meteorologists.)

Member of the Editorial Board of *Meteorologica*. 1992-present.

Member of the Editorial Board of *Geoacta*. 1998-present.

2.10 Reviewer

<i>Science</i>	<i>J. Climate</i>	<i>J. Hydrometeor.</i>
<i>Journal of Appl. Meteorol.</i>	<i>Mon. Wea. Rev.</i>	<i>J. Atmos. Sci.</i>
<i>Wea. Forecasting</i>	<i>Bull. Amer. Meteor. Soc.</i>	<i>J. Geophys. Res.-Atmospheres</i>
<i>Atmos. Sci. Letters</i>	<i>Geophys. Res. Letters</i>	<i>Atmosphere-Ocean</i>
<i>Int'l Journal Climatol.</i>	<i>Climate Dynamics</i>	<i>J. Meteor. Soc. Japan</i>
<i>Theor. Appl. Climatology</i>	<i>Hydrol. Sci. Journal</i>	<i>Encyclopedia of Hydrol Sci.</i>
<i>J. Policy Anal. and Manag.</i>	<i>Meteorologica (AR)</i>	<i>Geoacta (AR)</i>
<i>Revista Bras. de Meteorologia</i>	<i>Climatic Change</i>	<i>J. Arid Environments</i>
<i>Scientia Agricola (BR)</i>	<i>Global Planetary Change</i>	<i>J. Hydrol.</i>
HESS		

2.11 Model and Web developments

Forecasts for South America: <http://www.atmos.umd.edu/~berbery/research>

3. TEACHING, MENTORING, AND ADVISING

3.1 Research advisor

(all at the University of Maryland, unless otherwise stated)

PhD

Mathew Barlow (Ph. D., graduated 1999, co-advised with Sumant Nigam)

Yan Luo (Ph. D., graduated 2006)

Emily J. Becker (Ph. D., graduated 2008)

Seung-Jae Lee (Ph. D., graduated 2010)

Katherine Lukens (Ph. D., expected graduation 2018)

Eli J. Dennis (Ph. D candidate, started 2017)

Estela Collini (Ph. D., graduated 2009, *University of Buenos Aires, Argentina*)
Omar V. Müller (Ph. D., graduated 2015; *Universidad Nacional del Litoral, Santa Fe, Argentina*)
Leandro Sgroi (Ph.D., graduated 2017, co-advisor); *Universidad Nacional del Litoral, Santa Fe, Argentina*)
Mario Francisco Leal de Quadro (Ph. D., 2012; external advisor, *University of Sao Paulo, Brazil*)
Marília Guedes do Nascimento (Ph. D., 2013; external advisor, Instituto Nacional de Pesquisas Espaciais, Brazil)
Maria Agostina Bracalenti (Ph.D., started 2016); *Universidad Nacional del Litoral, Santa Fe, Argentina*)

MSc

Wanchun Chen (1998)
Yan Luo (2003)
Viviane Silva (2004)
J.-S. Paek (2005)
Emily J. Becker (2006)
Katherine Lukens (2015)

Undergraduate Tutoring

Katherine O'Brien, summer 2011, 2012, 2013
Michael Natoli, summer 2013, 2014, 2015
Marcel Caron, 2016

3.2 Postdocs

Carolina Vera (CONICET, Argentina, 1993-1998);
Claudio Menendez (CONICET, Argentina, 1994-1995);
Yimin Ji (1996);
Malaquias Peña (2003-2004);
Domingo Alcaraz-Segura (Universidad de Almeria, Spain, 2009-2010);
Anna A. Sörensson (IAI, Argentina 2010-2011).
Omar Müller (CONICET, 2015-pres.)
Miguel Lovino (CONICET, 2015-pres.)

3.3 Specialty examination committees

(To evaluate Ph. D. Prospectus)

Michael Taylor, Yimin Ji, Clemente Tanajura, Alfredo Ruiz-Barradas, Pablo Grunmann, Chi-Jan Meng (M. Sc.), Hengmao Wang., Kris Karnauskas, Hong Li, Junjie Liu, Ernesto Muñoz, Fan Lei; Lisa Murphy; Massimo Bolasina; Wallace Hogsett; Martina Ricko; Eric Nussbaumer; Jeehye Han.

3.4 Ph.D. Dissertation committees

Zhiyuan Dai, Alfredo Ruiz-Barradas, Rob Swanson (University of Utah), Arief Sudradjat (Department of Civil and Environmental Engineering, UMD), Marcos Andrade, Kris Karnauskas, Ernesto Muñoz, Junjie Liu, Wallace Hogsett, Massimo Bolasina.

3.5 Ph.D. Dissertation committees at the University of Buenos Aires

G. Silvestri (2003); Anna A. Sörensson (2010); Maximiliano Viale (2010); Fernanda Cabré (2012); Natalia Pessaq (2013).

3.6 General Courses Taught

At the University of Maryland

- METO 617: General Circulation of the Atmosphere (Spring 2001).
- METO 798: Directed Graduate Research (2002; 2003)
- METO 899: Doctoral Dissertation Research (2003-present)
- Developed the syllabus for a course called "*The Hydrologic Cycle as a component of the Earth System*".

At the University of Buenos Aires, Argentina (1977-1992)

Taught courses for undergraduate and graduate students on:

- Fluid Mechanics,
- Atmospheric Physics,
- Thermodynamics of the Atmosphere,
- Cloud Physics,
- Synoptic Meteorology,

At the University of La Plata, Argentina (1976-1977)

- Taught Meteorology for graduate students of Geophysics.

At the University of Utah (1988-1989; temporary substitutions)

- 512. Principles of motion: sound, gravity and Rossby waves.
- 615. Advanced planetary circulations: Isentropic analysis
- 513. Weather analysis and prediction: The energetics of baroclinic waves.

At the Universidad Nacional de Asunción, Paraguay (April 2011)

- Land use effects on the water balance and climate of large areas - regional climate models. Guest speaker at the *IAI Training Institute on Land Use Change Analysis and Water and Food Security in the La Plata Basin Region*

3.7 The International Summer School on Land Cover Change and Hydroclimate of the La Plata Basin

Organizers: E. Berbery, D. Herdies. This course was taught during 02–13 November 2009 in Foz do Iguaçu, Brazil. About 45 students from Latin America were selected from a total of about one hundred applicants.

Syllabus: The hydroclimate of the La Plata basin; Ecosystems, land cover/land use; Regional modeling; Hydrological modeling; Land-atmosphere interactions and feedbacks; Data assimilation systems; Regional land data assimilation systems; Remote sensing; Satellite products and their input in data assimilation systems.

Credits were given to Ph.D. students at several Universities.

3.8 Specialized Courses Taught

(With credits for Ph.D. students)

At the University of Buenos Aires, Argentina

- Theory and Observations of Intraseasonal Time Scale Phenomena (1991)

This was a special course for an audience ranging from Teaching Assistants to Assistant Professors. It covered many aspects that were the most recent research on dynamics and climate with a particular focus on the Southern Hemisphere. The course offered a view of intraseasonal scale phenomena based on concepts of Rossby Wave Propagation, Rossby Wave Sources, Potential Vorticity, Eliassen-Palm Fluxes and Plumb's Fluxes.

- South American Climate Diagnosis and Dynamics (June 2003; together with Dr. V. Barros).

This course focused on the main features of the Climate in South America: The summer monsoon and its components; the South Atlantic Convergence Zone; the Low-level Jet east of the Andes; Mesoscale Convective Systems; storm tracks and wave guides. The course discussed potential local and remote forcings and their potential impacts on the hydroclimate of large basins.

3.9 Tutoring of Visiting Scientists

From the Peruvian Weather Service: Clara Oria (Peru); Amelia Diaz (Peru); Grinia Avalos (Peru); Estela Collini (Argentina). Omar Müller (Argentina), Leandro Sgroi (Argentina), Miguel Lovino (Argentina), Luis Blacutt (Bolivia)

3.10 Teaching Notes

- Berbery, E. H., 1993: Stationary waves in the atmospheric circulation, 12pp, Dept. of Atmospheric Sciences, University of Buenos Aires.

- Berbery, E. H., 1991: Synoptic Meteorology: Fronts, Jet streams, and tropopause, 10pp, Dept. of Atmospheric Sciences, University of Buenos Aires.
- Berbery, E. H., 1983: Radiative Processes in the Atmosphere, 10pp, Dept. of Meteorology, University of Buenos Aires.
- Berbery, E. H., 1983: Cloud Physics, 11pp, Dept. of Meteorology, University of Buenos Aires.
- Berbery, E. H., 1983: Thermodynamics of the Atmosphere, 87pp, Dept. of Meteorology, University of Buenos Aires.
- Berbery, E. H., 1979: On the determination of the Psychrometric constant. A Laboratory Guide. Dept. of Meteorology, University of Buenos Aires.

4. SERVICE

4.1 Service at the University of Maryland

- | | |
|------------|--|
| 2017 | Member of the College of Computer, Mathematical, and Natural Sciences PTK Committee |
| 2016 | Member of the Search Committee for Associate Dean of the College of Computer, Mathematical, and Natural Sciences (CMNS). |
| 2012-pres | Member of ESSIC's Appointment, Promotion and Tenure (APT) Committee. |
| 2012 | Member of the Committee evaluating the performance of the Chair of the Department of Atmos. and Oce. Sci. |
| 2009-2011 | Chair of the Computer Committee of the Department of Atmos. and Oce. Sci. |
| 2007 | Member of the Search Committee for the Chair of the Department of Atmos. and Oce. Sci. |
| 2005-2010 | UCAR Member Representative. |
| 2003-2005 | Research Faculty Representative at the Executive Faculty Meetings, Dept. Meteor. |
| 2002 | Member of the Search Committee for the Chair of the Department of Meteorology |
| 2000-2003 | Chair of the Seminars Committee of the Department of Meteorology |
| 1998; 2000 | Search Committee for Post-Doctoral positions. |
| 1996 | Participation in the Research Subcommittee of the Department's Faculty Retreat. |
| 1995-2011 | Member of the Computer Committee, Department of Meteorology |

4.2 Service at the University of Buenos Aires

- | | |
|---|--|
| 2012 | Member of the Search Committee for an Assistant Professor at the Department of Atmospheric and Oceanic Sciences |
| 2007a | Member of the Search Committee for an Assistant Professor at the Department of Atmospheric and Oceanic Sciences |
| 2007b | Member of the Search Committee for an Assistant Professor at the Department of Atmospheric and Oceanic Sciences |
| 1992 | Member of the Search Committee for Assistant Professors at the Dept. Meteorology |
| 1987 | Member of the Search Committee for Assistant Professors at the Dept. Meteorology |
| 1986 | Member of the Search Committee for Assistant Professors at the Dept. Meteorology |
| 1986 | Review Panel on Research and Development Projects, Secretary of Science and Technology, College of Exact and Natural Sciences. |
| 1987 | Committee of the Computer Service of the College of Exact and Natural Sciences. |
| 1987, 1992, 2003, 2010, 2011, 2012, 2013: | Ph.D. and Licentiate Dissertation Evaluation Committees |

4.3 Committee memberships

- 2007-2015: **Co-chair** of the Int'l CLIVAR's *Variability of the American Monsoon Systems (VAMOS) Panel* (CLIVAR/WCRP).
- 2005-2011: **Co-chair** of the *La Plata Basin Science and Implementation Steering Group* (endorsed by CLIVAR/GEWEX/WCRP).
- 2009-2015: **Ex-officio member** of CLIVAR.
- 2011-2015: **Member** of the GEWEX Hydroclimatology Panel (GHP).
- 2007-2015: **Member-at-Large** of the Executive Committee of the *Int'l Association of Meteorology and Atmospheric Sciences (IAMAS)*.
- 2006-2015: **Member** of CLIVAR's *Variability of the American Monsoon Systems (VAMOS) Panel*.
- 2005-2011: **Member** of the *Planning Science Team of the Monsoon Experiment of South America (MESA)*, with the endorsement of VAMOS/CLIVAR.
- 2005-2010: **Member** of the NOAA *Climate Prediction Program for the Americas (CPPA) Science Panel*.
- 2002-2008: **Member** of the *Planning Science Team of the North American Monsoon Experiment (NAME)*, with the endorsement of VAMOS/CLIVAR.
- 2007-2008: **Member** of the *CEOP Tracking and Integrating of Group Responsibilities (TIGR) Team*.
- 2004-2005: **Member** of the US CLIVAR Pan American Implementation Panel.
- 2001-2005: **Member** of the *La Plata Basin Science Study Group*, with the endorsement of VAMOS/CLIVAR.
- 1999-2009: **Member** of the *Int'l Commission of Dynamic Meteorology of IAMAS*.
- 1999-2005: **Member** of the American Meteorological Society *Southern Hemisphere Meteorology and Oceanography Scientific and Technological Activities Commission*.
- 1996-1998: **Member** of the Steering Committee of the *South Atlantic Climatic Change Project* (sponsored by IAI).
- 1996-2001: **Member** of *GCIP's Diagnostic Studies Principal Research Area*.
- 1992, 1994: 1996: Participation in working panels of *GEWEX Continental Scale Int'l Project (GCIP/NOAA)*.
- 1983, 1987: **Member** of the Executive Committee of the *Argentine Center of Meteorologists*.

4.4 Membership in Professional Societies

Fellow of the American Meteorological Society;
 Member of the American Geophysical Union;
 Member of the European Geosciences Union;
 Life Member of the Argentine Center of Meteorologists;
 Member of the Int'l Association of Hydrological Sciences (IAHS)

4.5 Reviewing activities for agencies

- Reviewer of proposals submitted to NSF, NOAA, NASA, CONICET (Argentina), CONICYT (Chile), National Agency for the Promotion of Science and Technology (Argentina).
- Member of Review Panels for proposals to NOAA, NASA, DOE, and NSF.

4.6 Organization of National and International Events

- **Co-host** of the 38th Climate Diagnostics and Prediction Workshop, Climate Prediction Center/NCEP/NOAA. College Park, Maryland, 21-24 October 2013.
- **Vice President** of the *Tenth Argentinean Congress of Meteorology*, Buenos Aires, Argentina, Oct. 2009.
- **Leader of the Working Group** "*LCLUC Impacts on and Interaction with Carbon stocks, Water, and Climate*

in the La Plata Basin” IAI Joint Synthesis Meeting of the IDRC, CRN and SGP-HD projects “Land use, hydrology and climate in the La Plata basin”, Asunción (Paraguay), April 4-7, 2011

- **Vice-chair** of the *VAMOS Working Group on the South American Monsoon System (SAMS)*, Oct 22-24, 1998.
- **Coordinator** of the *Round Table to discuss the La Plata Basin Project*. Tenth Argentinean Congress of Meteorology, Buenos Aires, Argentina, Oct. 2009.
- **Coordinator** of the *Round Table to discuss the La Plata Basin Project*. XV Congresso Brasileiro de Meteorologia, Sao Paulo, Brazil, Aug 2008.
- **Convener** of *Dynamics and Variability of Monsoon Systems and their Effect on Climate*. Symposium, IAMAS 2005, Beijing, China, August 2005.
- **Convener** of *Dynamics and Variability of Monsoon Systems IAMAS Symposium*. IUGG 2003, Sapporo, Japan.
- **Convener** of *Symposium on Monsoon Systems around the World*, IAMAS 2001 Assembly, Innsbruck, Austria.
- **Convener** of the *La Plata Basin U.S. Planning Meeting*, Boulder, CO, Apr 2008.
- **Co-convener** of the *Advances and Frontier challenges in Global Monsoon Studies*, IAPSO-IAMAS-IAGA, Cape Town, South Africa, 27 Aug-1 Sep 2017.
- **Co-convener** of the *IAMAS Global Monsoons and Climate Change Symposium*, 26th IUGG General Assembly, Prague, Czech Republic, June 22-July 2, 2015.
- **Co-convener** of the *Global monsoon system: past, present and future*, Davos Atmosphere and Cryosphere Assembly 2013, Davos, Switzerland, July 8-12, 2013.
- **Co-convener** of the session “*Land cover and land use changes and their impacts on hydroclimate, ecosystems and society*” of the WCRP Open Science Conference, Denver, Colorado, 24-28 Oct 2011.
- **Co-convener** of the *Joint Symposium Monsoons, Tropical Cyclones and Tropical Dynamics*, IUGG 2011, Melbourne Australia, Jul.2011.
- **Co-convener** of the *Third Modeling and Analysis of the Present and Future Hydroclimate of the La Plata Basin*, The Meeting of the Americas, AGU, Foz do Iguassu, Brazil, August 2010.
- **Co-convener** of the *Third La Plata Basin Science and Implementation Steering Group Workshop*, Itaipu, Paraguay, February 2008.
- **Co-convener** of the *Symposium Diagnostic and Modeling Studies of the North American Monsoon*. American Geophysical Union Joint Assembly in Acapulco, México, 22-25 May 2007.
- **Co-convener** of the *Joint IAI and LPB Meeting and the Second La Plata Basin Science and Implementation Steering Group Workshop*, Buenos Aires, Argentina, March 2007.
- **Co-convener** of the *First La Plata Basin Science and Implementation Steering Group Workshop*, Guaratinguetá, Brazil, September 2006.
- **Member** of the Organizing Committee of the *8th International Conference on Southern Hemisphere Meteorology and Oceanography*, Foz do Iguacu, Brazil, April 2006.
- **Member** of the Scientific Organizing Committee of the Workshop on American Monsoons System - Coordinated Enhanced Observing Period Inter-Monsoon Model Study (CIMS) Project. Montevideo, Uruguay, Sep 17-18, 2004.
- **Member** of the Organizing Committee of the *7th International Conference on Southern Hemisphere Meteorology and Oceanography*, New Zealand, 2003.
- **Member** of the Organizing Committee of the *6th International Conference on Southern Hemisphere Meteorology and Oceanography*, Chile, 2000.
- **Member** of the Organizing Committee of the *Workshop on South Atlantic Climatic Change*. Guarujá, Brazil,

April 14-16, 1997.

- **Member** of the Organizing Committee of the *Workshop on Global Change Effects in the Southwestern Atlantic*. Atlantic Oceanographic and Meteorological Laboratory (AOML/NOAA), Miami, Sep 4-6, 1996.
- **Member** of the Organizing Committee of the *Workshop on Global Change Effects in the Southwestern Atlantic*. Fundação Universidade do Rio Grande, Rio Grande, Brazil, Sep 9-11, 1996
- **Member** of the Organizing Committee of the *Workshop on Global Change Effects in the Southwestern Atlantic*. Centro Nacional Patagónico (CENPAT/ CONICET), Puerto Madryn, Arg., Sep. 16-18, 1996.
- **Chaired sessions** at AMS, AGU, and IAMAS Conferences and Symposia; Inter American Institute for Global Change Research (IAI) Workshops; GEWEX and CLIVAR Meetings, and in many other workshops.