

Curriculum Vitae of Jennifer Anne Saleem Arrigo

EDUCATION

Boston University Department of Geography, Boston MA

January 2005

PhD in Geography

Dissertation Title: "*Observational analyses of hydrologic scaling: the roles of heterogeneity and non-local interactions as inferred from soil moisture and precipitation data.*"

Principal Advisor: Dr. Guido Salvucci

Boston University Center for Energy and Environmental Studies, Boston, MA

May 1999

B.A. in Environmental Science, *magna cum laude*

Concentration: Geographical Analysis

Minor: Environmental Analysis and Policy

RESEARCH INTERESTS

Hydrometeorology and precipitation predictability; Land-atmosphere interactions; scaling of hydrologic relationships; hydrologic impacts of land use, vegetation, and climate change; ecohydrology; improving modeling and monitoring of hydrologic systems for practical applications;

ACADEMIC EXPERIENCE/APPOINTMENTS

East Carolina University Department of Geography, Greenville, NC

Aug. 2006- present

Assistant Professor of Geography

Courses Taught Fall 2006: Geog 1250: The Water Planet

Worcester State College Department of Physical and Earth Sciences, Worcester, MA

Sept. 2004 – present

Assistant Professor of Geography

Load of 4 courses per semester, with additional

Courses taught: Introductory Physical Geography; Hydrology; Meteorology

Boston University Department of Geography, Boston MA

Sept. 1999 – Aug. 2003, May 2004 – August 2004

Graduate Research Assistant

An empirical study of the role of soil moisture in land surface hydrologic function via archived and remotely sensed precipitation and soil moisture, under direction of Dr. Guido Salvucci. Research

resulted in one published first author paper, one published second author paper, and one paper in revision.

Boston University Department of Geography, Boston MA

Teaching Fellow, GG101: Natural Environments: The Atmosphere
Fall 2003/Spring 2004

RELATED EXPERIENCE

Neponset River Watershed Association, Canton, MA

Environmental Scientist

April 1999 – Sept. 1999

Coordinated and trained a volunteer citizens water quality monitoring network of approximately 30 sites and 60 volunteers. Worked cooperatively with Massachusetts Water Resources Association and EPA to perform quality-assured water quality analysis, and analyzed and interpreted collected data. Performed various field duties in water use and sustainability study, including USGS-trained stream gauging, rating curve construction, habitat assessment surveys and macroinvertebrate sampling. Maintained six weather stations including evaporation pans and rain gauges. Participated in developing project proposals and external grant applications.

PUBLICATIONS

Journal Articles

Arrigo, J.A.S., and G.D. Salvucci, 2005, Investigating hydrologic scaling: observed effects of heterogeneity and non-local processes across hillslope, watershed, and regional scales. *Water Resources Research*, 41, W11417 doi:10.1029/2005WR004032.

Salvucci, G.D., **Saleem, J.A.**, and Kaufmann, R., 2002, Investigating soil moisture precipitation feedbacks with tests of Granger Causality, *Advances in Water Resources*, 25, 1305- 1312.

Saleem, J.A., and Salvucci, G.D., 2002, Comparison of soil wetness indices for inducing functional similarity of hydrologic response across sites in Illinois, *Journal of Hydrometeorology*, 3, 80-91.

Abstracts Presented at Professional Meetings and Conferences

Saleem Arrigo, J.A., 2005, Analyses of Citizen - Collected Water Quality Data: Bridging the Gap between "Hot Spots" to Understanding Processes, Eos Trans. AGU, 86(18), Jt. Assem. Supplement, Abstract H13A-06, *poster presentation*.

Saleem Arrigo, J.A. and G.D. Salvucci, 2004, Observational Analyses of Hydrologic Scaling: the Role of Non-Local Interactions as Inferred From Soil Moisture and Precipitation Data, Eos. Trans. AGU, 85(47), Fall Meeting Supplement, Abstract H13D-0459, *poster presentation*.

Saleem, J.A. and Salvucci, G.D., 2003, Evaluating the Influence of Spatial Processes and Information on Local Moisture-Outflow Relations: Characterizing the Scale of Interaction Using Soil Moisture and Precipitation Observations, AGU Fall Meeting, December 8-12, San Francisco, *oral presentation*.

Salvucci, G.D. and **Saleem, J.A.**, 2002, Lateral Processes and Heterogeneity in the Scale Dependence of Water Balance Sensitivity to Moisture, First CNR-Princeton Workshop on New Frontiers in Hydrology, October 23-25, Princeton, NJ, *invited presentation*.

Saleem, J.A. and Salvucci, G.D., 2002, Detecting Spatial Interactions and Interdependence of Moisture – Outflow Relations Among Regional Sites: A Statistical Method and its Application, AGU Spring Meeting, May 28-31, Washington, D.C., *poster presentation*.

Salvucci, G.D., **Saleem, J.A.**, and Kaufmann, R., 2002, Investigating Soil Moisture Feedbacks on Precipitation with Tests of Granger Causality, AGU Spring Meeting, May 28-31, Washington, D.C., *invited presentation*.

Salvucci, G.D. and **Saleem, J.A.**, 2001, Signatures of lateral processes in the scale dependence of water balance sensitivity to soil moisture, AGU Chapman Conference on State-of-the-Art in Hillslope Hydrology, Oct 8-12, Sunriver, OR, *invited presentation*.

Saleem, J.A. and Salvucci, G.D., 2001, Comparing Moisture Dependence of Hydrologic Fluxes Using Soil Wetness Index Transformations: Tests with Illinois Data, AGU Spring Meeting, May 29-June 1, Boston, MA, *poster presentation*.

Invited Lectures

Community Based Learning: Utilizing Citizen Collected Water Quality Data to Understand Watershed Processes, Assumption College, Natural Sciences Fall Colloquium Series, 2005.

The El Nino Phenomenon and the Galapagos: Two Different Worlds, Worcester State College Lecture Series on Evolution and Natural History, 2005.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union
Jan 2000 – present

American Meteorological Society
Jan. 2006 – present

American Association of Geographers
Jan. 2006 – present

GRANTS and AWARDS

Worcester State College Faculty Mini-Grant Program, 2005: \$1715.00 funded for proposal
“Encouraging Active and Informed Learning: Incorporating New Teaching and Assessment Techniques in Science Courses through Environmental Problem Solving”

Boston University Graduate Research Assistant Scholarship
Environmental Scientist Outstanding Student Award
Golden Key National Honor Society
Boston University College of Arts and Sciences Dean’s List

Fall 1999 – Spring 2003
May 1999
Inducted Fall 1998
Fall 1996/ Spring 1996
Spring 1999