

**Stacey A. Archfield, Ph.D.**  
10 Bearfoot Road, Northborough, MA 01532  
+1.508.490.5072 / sarch@usgs.gov

## EDUCATION

Doctor of Philosophy, Civil and Environmental Engineering, Tufts University, 2009  
Title: “Estimation of continuous daily streamflow at ungauged locations in southern New England”  
Advisor: Dr. Richard M. Vogel  
Master of Science, Geosystems, Massachusetts Institute of Technology, 2001  
Title: “Exploring mechanisms for the decrease of atmospheric carbon dioxide during the last glacial maximum using a four-box ocean model”  
Advisor: Dr. Edward A. Boyle  
Bachelor of Science, Geology, Northeastern University, 1999  
Minor in Mathematics

## PROFESSIONAL APPOINTMENTS

U.S. Geological Survey, Massachusetts-Rhode Island Water Science Center  
Research Hydrologist, 2008-Present  
Hydrologist (Project Chief), 2004-2008  
Hydrologist, 1998-2004  
Tufts University, Department of Civil and Environmental Engineering  
Research Assistant, 2003-2009  
Massachusetts Institute of Technology, Earth Resources Laboratory  
Research Assistant, 2001  
Harvard-Smithsonian Center for Astrophysics, Space Geodesy Group  
Research Associate, 1999

## HONORS AND AWARDS

Archfield and Vogel [2010] paper was featured in the EOS Research Spotlight: Eos Trans. AGU, 92(6), 52, doi:10.1029/2011EO060009. *Papers featured in the Research Spotlight are selected by the editors of the 18 journals published by the American Geophysical Union. Only 3 to 4 papers are selected bi-weekly to be featured.* (2011).  
Hirsch, Moyer and Archfield [2010] paper was selected as one of four finalists for the William R. Boggess Award, *This award is given to a paper published in the Journal of the American Water Resources Association that best describes, delineates, or analyzes a major problem or aspect of water resources from either a theoretical, applied, or philosophical standpoint.* (<http://awramedia.org/jawra/2011/05/11/2011-boggess-finalists/>) (2011).  
Selected to deliver the 2010 U.S. Geological Survey Chief Hydrologist Seminar, *Only one researcher from the U.S. Geological Survey is selected each year to deliver this seminar* (2010).  
Outstanding Student Paper Award, American Geophysical Union Fall Meeting (2009).

U.S. Geological Survey Exceptional Performance Rating, *Highest performance rating achievable* (2011; 2010; 2009; 2008; 2007; 2006).

Tufts University Civil & Environmental Engineering Department Littleton Award, *Professional Promise Award* (2009).

U.S. Geological Survey Special Thanks for Achieving Results (STAR) awards, *Recognition of contributions to various studies* (2002; 2001; 1999).

Northeastern University Commencement Speaker, *Selected to deliver the student commencement address* (1999).

Northeastern University Wendy Breen Kline Award, *Professional Promise Award* (1999).

Northeastern University Gregory Jarvis Scholarship Recipient, *Most Outstanding Senior for Academics and Student Activities* (1999).

Northeastern University Student Body President, *First geology major to be elected to this position* (1997-1998).

## PUBLICATIONS

### Refereed book chapters (*Two chapters in preparation*)

Co-author, “Statistical runoff simulation methods.” In: Runoff prediction in ungauged basins – a synthesis and benchmark assessment, Bloeschl, G., M. Sivapalan, T. Wagener, H. Savenije, (Eds.). Cambridge University Press, UK.

Contributor, “Case studies,” In: Runoff prediction in ungauged basins – A synthesis, Bloeschl, G., M. Sivapalan, T. Wagener, H. Savenije, (Eds.). Cambridge University Press, UK.

### Refereed journal articles

**Archfield, S.A.**, R.M. Vogel, P.A. Steeves, J.D. Guthrie, and K. Ries, *in revision*, Estimation of unregulated, complete daily flow duration curves and streamflow time series at ungauged sites, *to be re-submitted to Environmental Modeling and Software*.

**Archfield, S.A.**, R. Singh, T. Wagener, and R.M. Vogel, *in review*, Transferring rainfall runoff model parameters to ungauged catchments: Does the hydrologic similarity metric matter?, *submitted to Water Resources Research*, submitted April 11, 2012.

Medalie, L., R.M. Hirsch, and **S.A. Archfield**, 2011, Use of flow-normalization to evaluate nutrient concentration and flux changes in Lake Champlain tributaries, 1990–2009, *Journal of Great Lakes Research*, *in press*, doi: 10.1016/j.jglr.2011.10.002.

**Archfield, S. A.**, and R.M. Vogel, 2010, Map correlation method: Selection of a reference streamgauge to estimate daily streamflow at ungauged catchments, *Water Resources Research*, 46, W10513, doi:10.1029/2009WR008481.

Hirsch, R.M., D. Moyer, and **S.A. Archfield**, 2010, Analysis of long-term surface water quality data using Weighted Regressions on Time, Discharge, and Season (WRTDS): motivations, method, and application to Chesapeake Bay River Input Monitoring data, *Journal of the American Water Resources Association*, 46(5):857-880. DOI: 10.1111/j.1752-1688.2010.00482.x.

Vogel, R.M., J. Sieber, **S.A. Archfield**, M.P. Smith, C.D. Apse and A. Huber-Lee, 2007, Relations among storage, yield and instream flow, *Water Resources Research*, 43, doi:10.1029/2006WR005226, 2007.

## U.S. Geological Survey reports (*Two formal colleague reviews are required for publication*)

- Linhart, S.M., J.F. Nania, C.L. Sanders, and **S.A. Archfield**, *in review*, Computing mean daily streamflow using the flow-anywhere and flow-duration-curve-transfer statistical methods at ungauged locations in Iowa, *U.S. Geological Survey Scientific Investigations Report*.
- Kiang, J.E., D. Stewart, **S.A. Archfield**, and K. Eng, *in review*, A National Streamflow Network Gap Analysis, *U.S. Geological Survey Scientific Investigations Report*.
- Levin, S.L., **S.A. Archfield**, and A.J. Massey, 2011, Refinement and Further Evaluation of the Massachusetts Firm-Yield Estimator Model Version 2.0, *U.S. Geological Survey Scientific Investigations Report 2011-5125*, 49 p., plus CD-ROM.
- Weiskel, P.K., S.L. Brandt, L.A. DeSimone, L.J. Ostiguy, and **S.A. Archfield**, 2010, Indicators of streamflow alteration, habitat fragmentation, impervious cover, and water quality for Massachusetts stream basins, *U.S. Geological Survey Scientific Investigations Report 2009-5272*, 70 p., plus CD-ROM.
- Archfield, S.A.**, R.M. Vogel, P.A. Steeves, S.B. Brandt, P.K. Weiskel, and S.P. Garabedian, 2010, The Massachusetts Sustainable-Yield Estimator: A decision-support tool to assess water availability at ungauged sites in Massachusetts, *U.S. Geological Survey Scientific Investigations Report 2009-5227*, 41 p., plus CD-ROM.
- Carlson, C.S. and **S.A. Archfield**, 2008, Hydrogeologic conditions and a firm-yield assessment for J.B. Converse Lake, Mobile County, Alabama, 1991-2006: *U.S. Geological Survey Scientific Investigations Report 2008-5005*.
- Archfield, S.A.**, and C.S. Carlson, 2006, Ground-Water Contributions to Reservoir Storage and the Effect on Estimates of Firm Yield for Reservoirs in Massachusetts: *U.S. Geological Survey Scientific Investigations Report 2006-5045*.
- Waldron, M.C., and **S.A. Archfield**, 2006, Factors Affecting Firm Yield and the Estimation of Firm Yield for 47 Streamflow-Dominated Drinking-Water-Supply Reservoirs in Massachusetts: *U.S. Geological Survey Scientific Investigations Report 2006-5044*.
- Archfield, S.A.**, and D.L. LeBlanc, 2005, Comparison of Diffusion- and Pumped-Sampling Methods to Monitor Volatile Organic Compounds in Ground Water, Massachusetts Military Reservation, Cape Cod, Massachusetts, July 1999-December 2002: *U.S. Geological Survey Scientific Investigations Report 2005-5010*.
- Bent, G.C., and **S.A. Archfield**, 2002, A Logistic Regression Equation for Estimating the Probability of a Stream Flowing Perennially in Massachusetts: *U.S. Geological Survey Water-Resources Investigations Report 02-4043*, 45 p.

## Software

- Archfield, S.A.** and Steeves, P.A., 2011, The Connecticut River Unimpacted Flow tool: A GIS-based tool to estimate daily streamflow at ungauged locations in the Connecticut River Basin (Version 1.x) [Computer software]. Northborough, MA: U.S. Geological Survey, <http://webdmamrl.er.usgs.gov/s1/sarch/ctrtool/index.html>.
- Archfield, S.A.** and Granato, G.E., 2010, The Massachusetts Sustainable-Yield Estimator: A decision-support tool to assess water availability at ungauged stream locations in Massachusetts (Version 1.x), [Computer software]. Northborough, MA: U.S. Geological Survey, [http://webdmamrl.er.usgs.gov/s1/sarch/software/sye\\_mainpage.htm](http://webdmamrl.er.usgs.gov/s1/sarch/software/sye_mainpage.htm).
- Archfield, S.A.**, 2009, Bioperiods Flow Calculator: A tool to determine streamflow statistics for user-specified bioperiods, (Version 1.x), [Computer software]. Northborough, MA:

U.S. Geological Survey, *provided to the Connecticut Department of Environmental Protection and The Nature Conservancy.*

**Archfield, S.A.**, 2009, Pond Calculator: An automated tool to determine pond stratification, (Version 1.x), [Computer software]. Northborough, MA: U.S. Geological Survey, *provided to staff at the National Park Service Cape Cod National Seashore.*

### Conference proceedings

**Archfield, S.A.** and R.M. Vogel, 2009, The implications of discretizing continuous random variables: An example using the U.S. Geological Survey reporting standards for streamflow data, *Proceedings of the American Society of Civil Engineers World Environmental and Water Resources Congress*, Kansas City, Missouri, May 2009.

**Archfield, S.A.**, R.M. Vogel, and S.B. Brandt, 2007, Estimation of flow-duration curves at ungaged sites in southern New England, *Proceedings of the American Society of Civil Engineers World Water and Environmental Resources Congress*, Tampa, FL, 2007.

**Archfield, S.A.** and R.M. Vogel, 2005, Reliability of reservoir firm yield determined from the historical drought of record, *Proceedings of the American Society of Civil Engineers World Water and Environmental Resources Congress*, Anchorage, Alaska, 2005.

### INVITED SEMINARS AND WORKSHOPS

**Archfield, S.A.**, 2010, “New tools to estimate water availability at ungaged sites,” *U.S. Geological Survey Chief Hydrologist Seminar*, National Center, Reston, VA, April 2010 (*Only one researcher from the U.S. Geological Survey is selected each year to deliver this seminar.*)

**Archfield, S.A.**, 2010, “Balancing water use and ecological-flow needs: A decision-support tool to interactively assess water availability at ungaged sites in Massachusetts,” *U.S. Geological Survey Water Use Workshop*, Baltimore, MD, April 2010.

**Archfield, S.A.**, 2010, “Estimation of daily streamflow time series at ungauged catchments using map correlation,” *Department of Civil and Environmental Engineering, Pennsylvania State University*, University Park, PA, April 2010.

**Archfield, S.A.**, 2009, “Estimating water availability at ungaged sites,” *U.S. Geological Survey National Research Program Water Resources Discipline Research Seminar*, Reston, Virginia, January 2009.

**Archfield, S.A.**, 2008, “The Massachusetts Firm-Yield Estimator: A decision-support system to determine firm yields for drinking-water-supply reservoirs in Massachusetts,” *Department of Natural Resources Management and Engineering Seminar Series, University of Connecticut*, February 2008.

**Archfield, S.A.**, 2007, “Construction of a Complete Hydrograph at Ungaged Sites,” *Special Session on Low-Flow Hydrology, U.S. Geological Survey National Surface Water Conference and Hydroacoustics Workshop*, St. Louis, Missouri, April 2007.

### CONFERENCE PRESENTATIONS

[\* invited]

**Archfield, S.A.** and R.M. Vogel, 2012, Fitting three- and four-parameter probability distributions to daily streamflow, *American Water Resources Association 2012 Annual Water Resources Conference*, Jacksonville, Florida, November 2012.

- Archfield, S.A.**, A. Pugliese, A. Castellarin, J.E. Kiang, and J.O. Skoien, 2012, “Performance of statistical interpolation to traditional methods for design-flood prediction in ungauged basins in the southeast United States”, *3<sup>rd</sup> Statistics in Hydrology Working Group (STAHY) International Workshop on Statistical Methods for Hydrology and Water Resources Management*, Tunis, Tunisia, October 2012.
- Archfield, S.A.**, A. Pugliese, A. Castellarin, J.E. Kiang, and J.O. Skoien, 2012, “Performance of topological and canonical kriging to traditional methods for design-flood prediction in ungauged basins in the southeast United States,” *European Geosciences Union 2012 General Assembly*, Vienna, Austria, April 2012.
- Archfield, S.A.**, P.A. Steeves, J.D. Guthrie, and K. Ries, 2012, “A publically-available, web-based software tool to estimate daily streamflow at ungauged locations in the northeast United States,” *European Geosciences Union 2012 General Assembly*, Vienna, Austria, April 2012.
- Singh, R., **S.A. Archfield**, T. Wagener, and R.M. Vogel, 2012, “Transferring rainfall runoff model parameters to ungauged catchments: Does the metric by which hydrologic similarity is defined actually matter?” *European Geosciences Union 2012 General Assembly*, Vienna, Austria, April 2012.
- Archfield, S.A.**, P.A. Steeves, J.D. Guthrie, and K. Ries, 2012, “An interactive, GIS-based application to estimate continuous, unimpacted daily streamflow at ungauged locations in the Connecticut River Basin,” *2012 American Water Resources Association Spring GIS Specialty Conference*, March 2012.
- Archfield, S.A.** and J.E. Kiang, 2011, “Response of the United States streamgauge network to high- and low-flow periods,” *American Geophysical Union 2011 Fall Meeting*, San Francisco, CA, December 2011.
- Archfield, S.A.**, A. Castellarin, J.O. Skøien, and J.E. Kiang, 2011, “Coupling topological and canonical kriging for design-flood prediction in ungauged basins in the southeastern United States,” *European Geosciences Union Leonardo Conference Series on the Hydrological Cycle Floods in 3D: Processes, Patterns, Predictions*, Bratislava, Slovakia, November 2011.
- Archfield, S.A.** and P.A. Steeves, 2011, “An interactive, GIS-based application to estimate continuous, unimpacted daily streamflow at ungauged locations in the Connecticut River Basin,” *U.S. Geological Survey National Map User’s Conference*, Denver, CO, May 2011.
- \***Archfield, S.A.** and Levin, S.L., 2011, “Estimation of daily streamflow time series at ungauged basins using the map correlation method,” *8th Annual Water Resources Conference*, Amherst, MA, April 2011.
- Archfield, S.A.**, R. Singh, T. Wagener, and R.M. Vogel, 2011, “Estimation of daily streamflow time series at ungauged basins using the map correlation method,” *European Geosciences Union 2010 General Assembly*, Vienna, Austria, April 2011.
- \***Archfield, S.A.**, D. Wolock, D. Calisle, J. Kennen, K. Eng, and J. Kiang, 2011, “An updated hydroclassification of streamflows at minimally-altered streamgages for the conterminous United States,” *2011 U.S. Geological Survey National Surface Water Conference and Hydroacoustics Workshop*, Tampa, FL, March 2011.
- \***Archfield, S.A.**, 2011, “Estimation of daily streamflow time series at ungauged basins using the map correlation method,” *2011 U.S. Geological Survey National Surface Water Conference and Hydroacoustics Workshop*, Tampa, FL, March 2011.
- Wolock, D., **S.A. Archfield**, D. Calisle, J. Kennen, K. Eng, and J. Kiang, 2010, “An updated hydroclassification of streamflows at minimally-altered streamgages for the conterminous

- United States,” *American Geophysical Union 2010 Fall Meeting*, San Francisco, CA, December 2010.
- Archfield, S.A.**, R.M. Hirsch, and R.M. Vogel, 2010, “Prediction intervals for estimated water-quality concentrations and fluxes with serially-correlated residuals,” *American Geophysical Union 2010 Fall Meeting*, San Francisco, CA, December 2010.
- Archfield, S.A.**, R.M. Vogel, T. Waneger, and R. Singh, 2010, “Rainfall-runoff model calibration at an ungauged catchment using the map-correlation method,” *European Geosciences Union 2010 General Assembly*, Vienna, Austria, May 2010.
- \***Archfield, S.A.**, R.M. Vogel, T. Wagener, and R. Singh, 2009, “Rainfall-runoff model calibration at an ungauged catchment using the map-correlation method,” *American Geophysical Union Fall Meeting 2009*, San Francisco, CA, December 2009 (*Received an American Geophysical Union Outstanding Student Paper Award for this presentation*).
- \***Archfield, S.A.**, R.M. Vogel, P.A. Steeves, S.B. Brandt, P.K. Weiskel, and S.P. Garabedian, 2009, “A decision-support tool to assess water availability at ungauged sites in Massachusetts,” *Northeast Association of Fish and Wildlife Agencies 65<sup>th</sup> Annual Northeast Fish and Wildlife Conference*, Lancaster, Pennsylvania, April 2009.
- Archfield, S.A.**, R.M. Vogel, P.A. Steeves, S.B. Brandt, P.K. Weiskel, and S.P. Garabedian, 2009, “A decision-support tool to assess water availability at ungauged sites in Massachusetts,” *Geological Society of America 44<sup>th</sup> Annual Northeastern Section Meeting*, Portland, Maine, April 2009.
- Gao, Y., **S.A. Archfield**, and R.M. Vogel, 2009, Estimation of Daily Streamflow Series at Ungauged Sites in the Semi-arid Volta Basin of West Africa. *European Geosciences Union 2009 General Assembly*, Vienna, Austria, April 2009.
- \***Archfield, S.A.**, 2008, “The Massachusetts Sustainable-Yield Estimator: A decision-support tool to estimate continuous daily streamflow at ungauged locations in Massachusetts,” *Joint meeting of the U.S. Geological Survey and The Nature Conservancy, Regional-Scale Streamflow-Ecology Relationships*, Seattle, Washington, April 2008.
- Archfield, S.A.**, and P.A., Steeves, 2008, “A Desktop Application to Assess Sustainable Basin Yields and Surface-Water Resources in Massachusetts,” *Association of American Geographers Annual Meeting*, Boston, Massachusetts, April 2008.
- Massey, A. J., L.J. Ostiguy, and **S.A. Archfield**, 2008, “Bathymetric Surveying: Determination of the minimum number of water-depth measurements needed to characterize reservoir storage,” *Association of American Geographers Annual Meeting*, Boston, Massachusetts, April 2008.
- Steeves, P.A., and **S.A. Archfield**, 2008, “A Desktop Application to Assess Sustainable Basin Yields and Surface-Water Resources in Massachusetts,” *American Water Resources Association Spring Specialty Conference on GIS and Water Resources*, San Mateo, CA, March 2008.
- Allaire, M. and **S.A. Archfield**, 2007, “USGS Firm-Yield Estimator Model: Evaluating the influence of small reservoirs on ground-water recharge,” *Geological Society of America Annual Meeting*, Denver, CO, October 2007.
- Archfield, S.A.**, R.M. Vogel, and S.B. Brandt, 2007, “Estimation of continuous daily streamflow at ungauged sites in southern New England,” *Massachusetts Water Resources Center Fifth Annual Water Resources Conference*, Amherst, MA, April 2007.
- Archfield, S.A.**, 2006, “The effect of ground water on estimates of reservoir firm yield,” *American Geophysical Union Joint Assembly*, Baltimore, MD, April 2006.

## FUNDING AS PRINCIPAL OR CO-PRINCIPAL INVESTIGATOR

[+ Principal Investigator]

- National comparison of models to estimate daily streamflow at ungaged basins, (*Project duration: 2011-2013; Budget: \$750,000; Archfield share: \$200,000; PD: Julie Kiang, U.S. Geological Survey; Funding source: U.S. Geological Survey National Water Census Initiative*)
- +An updated hydroclassification of streamflows at minimally-altered streamgages for the conterminous United States (*Project duration: 2010-2012; Budget: \$250,000; Funding sources: U.S. Geological Survey National Water-Quality Assessment Program, U.S. Geological Survey National Water Census Initiative*)
  - +Prediction intervals for estimated water-quality concentrations and fluxes with serially-correlated residuals (*Project duration: 2010-2012; Budget: \$75,000; Funding source: U.S. Geological Survey National Water-Quality Assessment Program*)
- National network gap analysis of U.S. Geological Survey streamgages (*Project duration: 2011-2012; Budget: \$125,000; Archfield share: \$50,000; PD: Julie Kiang, U.S. Geological Survey; Funding source: U.S. Fish and Wildlife Service*)
- +An interactive, GIS-based application to estimate continuous, unimpacted daily streamflow at ungaged locations in the Connecticut River Basin (*Project duration: 2008-2011; Budget: \$111,000; Funding sources: New England Association of Fish and Wildlife Agencies, The Nature Conservancy, U.S. Army Corps of Engineers*)
  - +Refinement and further evaluation of the Massachusetts Firm-Yield-Estimator model version 2.0 (*Project duration: 2007-2011; Budget: \$650,000; Funding sources: U.S. Geological Survey Cooperative Water Program, Massachusetts Department of Environmental Protection*)
  - +Development of a Sustainable-Yield Estimator application to determine water availability at ungaged locations in Massachusetts (*Project duration: 2006-2010; Budget: \$450,000; Funding sources: U.S. Geological Survey Cooperative Water Program, Massachusetts Department of Environmental Protection*)

## PROFESSIONAL SERVICE

### Journal editorships

Editor, *Hydrology and Earth Systems Sciences*, 2012-Present

### Reviewer

Manuscript reviewer for the journals:

- Water Resources Research, Hydrology and Earth Systems Sciences, Water Research, Journal of Hydrologic Engineering, Environmental Modeling & Software, Journal of Environmental Quality, Water Resources Management, River Research and Applications
- Reviewer, U.S. Geological Survey Peer Panel Review Process for Research Grade Evaluations in the Surface Water and Geomorphology Disciplines (*Panel to review U.S. Geological Survey researchers for promotion*) (2010).
- Reviewer, Environmental Protection Agency Technical Guide titled, “Identifying and protecting healthy watersheds: A technical guide” (2009).

## **Committee membership**

Member, U.S. Geological Survey National Water Census Ad Hoc Advisory Committee, Reston, VA, August 2010-Present. *The Ad Hoc Advisory Committee is a group of national stakeholder organizations that provide input on the priorities for the U.S. Geological Survey National Water Census Initiative.*

Member, Pennsylvania Instream Flow Committee, 2009-Present

Member, Surface-Water Hydrology Committee, Environmental and Water Resources Institute, American Society of Civil Engineers, 2008-2011

Member, Human Water Use Work Group, U.S. Geological Survey National Water Census Implementation Plan, September 2009-January 2010.

Member, Ecological Water Use Work Group, U.S. Geological Survey National Water Census Implementation Plan, September 2009-January 2010.

## **Invited panel member**

Panel member for session titled, “StreamStats Panel Discussion,” *2011 National Surface Water Conference and Hydroacoustics Workshop*, Tampa, FL, March 2011.

Panel member for session titled, “Networking for a career in public service”, *Tufts University symposium on Preparing for a Career in Public Service*, Medford, MA, October 2010.

Panel member for session titled “Approaches for Building a Hydrologic Foundation for Regional Analysis of Flow-Ecology Relations,” *Joint meeting of the U.S. Geological Survey and The Nature Conservancy on Regional-Scale Streamflow-Ecology Relationships*, Seattle, WA, April 2008.

## **Session organizer/moderator**

Convener, 2012, Session titled “Catchment Similarity and Organisation”, *European Geosciences Union 2012 General Assembly*, Vienna, Austria, April 2012. (Co-conveners: Thorsten Wagener, Attilio Castellarin, Brian McGlynn, Erwin Zehe, Uwe Ehret, and Ulrike Scherer)

Session Moderator, 2012, “Integrated Streamflow Simulation,” *2012 American Water Resources Association GIS Specialty Conference*, New Orleans, LA, March 2012.

Convener, 2011, Session titled “Hydrologic Similarity at the Catchment Scale”, *European Geosciences Union 2011 General Assembly*, Vienna, Austria, April 2011. (Co-conveners: Thorsten Wagener, Attilio Castellarin, Doerthe Tetzlaff and Richard Vogel)

Session Moderator, 2011, “Stats and Hydrologic Data—Network Analysis, Instrument Comparisons and Uncertainty,” *2011 U.S. Geological Survey National Surface Water Conference and Hydroacoustics Workshop*, Tampa, FL, March 2011.

Co-organizer, 2010, Special Session on Stochastic and Probabilistic Methods for Water Resources Planning and Management, *2010 World Environmental and Water Resources Congress*, Providence, RI, May 2010. (Organizer: Veronica W. Griffis, Fellow co-organizer: Jerry R. Stedinger)

Session Moderator, 2009, Generation/Forecasting of Hydrologic Time Series, *2009 World Environmental and Water Resources Congress*, Kansas City, Missouri, May 2009.

Co-organizer, 2009, Special Session on Stochastic and Probabilistic Methods for Water Resources Planning and Management, *2009 World Environmental and Water Resources*

Congress, Kansas City, Missouri, May 2009. (Organizer: Veronica W. Griffis, Fellow co-organizer: Jerry R. Stedinger)

## **TEACHING AND MENTORING EXPERINCE**

### **Guest lecture**

Department of Civil and Environmental Engineering, Worcester Polytechnic Institute,  
Course CE 574 - Water Resources Management, November 2009.

### **External examiner**

William Asquith, Ph.D. candidate, “Univariate Distributional Analysis with L-moment Statistics using R,” Department of Civil and Environmental Engineering, *Texas Tech University*, Graduated: February 2011.

### **Graduate student committees**

William Farmer, M.S. candidate, “Development of Gridded/Catchment Monthly Streamflow Time Series for the United States, South Africa and the Nile River Basin,” Department of Civil and Environmental Engineering, *Tufts University*, Graduated: November 2011.

David Roman, M.S. candidate, “Multivariate Models of Watershed Suspended Sediment Loads for the Eastern United States,” Department of Civil and Environmental Engineering, *Tufts University*, Graduated: June 2010.

### **Other teaching and mentoring experience**

Mentor, Women in Geosciences Mentoring Programme, European Geosciences Union, 2011-Present.

Lead author of the statistical hydrology teaching module for the MODular Curriculum for Hydrologic Advancement (MOCHA) project, 2011-Present. *MOCHA is an NSF-funded education initiative to “establish an online faculty learning community for hydrology education and a modular hydrology curriculum based on modern pedagogical standards”* (<http://www.mocha.psu.edu/about>). *Each MOCHA module represents three hours of lecture material on a particular topic intended for inclusion in an undergraduate hydrology course*, 2011-Present. (Co-authors: Veronica Griffis and Lucy Marshall)

Mathematics tutor, Northeastern University, September 1998-June 1999. *Sole mathematics tutor for student athletes; provided weekly tutoring sessions in undergraduate courses including algebra, beginning and advanced calculus (Calculus Levels I through IV) and differential equations.*

## **PROFESSIONAL MEMBERSHIPS**

American Geophysical Union (AGU)

European Geosciences Union (EGU)

Environmental and Water Resources Institute, American Society of Civil Engineers (EWRI)