Biographical Sketch

CASEY BROWN
Assistant Professor
Department of Civil and Environmental Engineering
University of Massachusetts Amherst

Education and Training

Postdoc	Hydroclimatology, IRI**, Columbia University,** 2004 - 2005
Ph.D.	Environmental Engineering Science, **Harvard University**, 2004
M.S.	Environmental Engineering, **University of Massachusetts**, 1994
B.S.	Civil Engineering, **University of Notre Dame**, 1993

Academic Appointments

Assistant Professor, Department of Civil and Environmental Engineering, University of Massachusetts Amherst, September 2008 to present
Associate Research Scientist and Water Team Leader, International Research Institute for Climate and Society, Columbia University, August 2005 to August 2008
Postdoctoral Research Scientist, International Research Institute for Climate and Society, Columbia University, October 2004 to August 2005

Recent Relevant Publications

1. Steinschneider, S. and C. Brown (2012) "Dynamic reservoir management with real options risk hedging as a robust adaptation to nonstationary climate" *Water Resources Research* (in press).
2. Steinschneider, S. and Brown, C. (2011) "Influences of North Atlantic climate variability on low-flows in the Connecticut River Basin" *Journal of Hydrology,* 409, 212-224.
3. Brown, C., Werick, W., Fay, D., and Leger, W. (2011) "A Decision Analytic Approach to Managing Climate Risks - Application to the Upper Great Lakes" *Journal of the American Water Resources Association*, 47, 3, doi/10.1111/j.1752-1688.2011.00552.x.
4. Brown, C. (2010). "The End of Reliability." ASCE Journal of Water Resources Planning and Management, 136, No. 3, 2010 (May/June 2010).
5. Kwon, H-H, Brown, C. and U. Lall, (2008) "Climate informed flood frequency analysis and prediction in Montana using Hierarchical Bayesian Modeling, *Geophysical Research Letters*, 35, GL032220.
6. Brown, C. and M. Carriquiry, (2007) "Managing hydroclimatic risk with option contracts and reservoir index insurance," *Water Resources Research*, 2007WR006093

Five Other Publications

1. Brown, C. and U. Lall. (2006) "Water and Economic Development: The Role of Variability and a Framework for Resilience," *Natural Resources Forum* 30: 4, 306 – 317. doi:10.1111/j.1477-8947.2006.00118.
2. Souza Filho, F.A., and Brown, C. (2009). "Performance of water policy reforms under scarcity conditions: a case study in northeast Brazil." *Water Policy* 11, 553 - 558.
3. Westra, S., Brown, C., Sharma, A., and U. Lall, (2007) "Modeling multivariable hydrological series: Principal Component Analysis or Independent Component Analysis?," *Water Resources Research*, 2006WR005617.
4. Westra, S., Brown, C., Lall, U., Koch, I., and Sharma, A. (2009). "Interpreting variability in global SST data using independent component analysis and principal component analysis." *International Journal of Climatology*, DOI: 10.1002/joc.1888.

5. Westra, S., Sharma, A., Brown, C., and U. Lall, (2008) "Multivariate streamflow forecasting using independent component analysis" *Water Resources Research*, 2007WR006104.

Five Synergistic Activities

1. Founding Chair of the ASCE Technical Task Committee on Water Systems Planning under Climate Change and founding chair of the AGU Hydrology Section Technical Committee on Water and Society. The goals of the committee are to disseminate relevant scientific advances on managing climate uncertainty for the water sector to the practicing committee through a symposium to be held at the 2011 ASCE EWRI annual congress, a special issue of the Journal of Water Resources Planning and Management, and webinars for the practicing community.
2. Principal Investigator of CBET-1054762 - CAREER: Robust Management of Climate Uncertainty for Ecohydrological Sustainability. The study focuses on adaptation to climate change and will involve undergraduate students and K12 students in a 4H program on STEM.
3. Frequent speaker on issues of downscaling GCM projections for infrastructure assessments, including the First National Expert and Stakeholder Workshop on Water Infrastructure Sustainability and Adaptation to Climate Change, EPA Office of Water and Office of Research and Development. January 6, Washington D.C. and the Hydrology and Climate TWG Workshop, International Upper Great Lakes Study of the International Joint Commission, June 10, Cleveland, Ohio.
4. Active leadership and service to the profession including serving as Associate Editor to the ASCE *Journal of Water Resources Planning and Management* (2006 – present) and co-convener of conference sessions at the American Geophysical Union Fall Meeting and the 2006 World Water Forum.
5. Principal investigator or co-PI on current environmental restoration projections on the Connecticut River Basin sponsored by The Nature Conservancy and on the Upper Great Lakes sponsored by the International Joint Commission.

Graduate and Post-Graduate Advisors
Peter Rogers, Harvard University (PhD)
Upmanu Lall, Columbia University (Postdoctoral Research)

Collaborators in last 48 months (not including advisees)
D. Ahlfeld, University of Massachusetts
R. Bradley, University of Massachusetts
A. Greene, Columbia University
J. Hansen, Columbia University
H-H. Kwon, Korea Institute of Construction Technology
U. Lall, Columbia University
R. Palmer, University of Massachusetts
N. Ward, Columbia University
D. Watkins, Michigan Technical University

Advisees within last five years

Current Graduate Students

Paul Moody, PhD; Scott Steinschneider, PhD; Umit Taner, PhD; Sarah Whateley, MS; Jesus Morales, MS; Julia Ryan, MS;

Post-Doctoral Scholars

Yi-chen Yang; Elizabeth Homa