

Sankarasubramanian (Sankar) Arumugam

Department of Civil, Construction and Environmental Engineering
North Carolina State University (NCSU), Raleigh NC 27695-7908

Professional Preparation

Tamilnadu Agr.Univ., Coimbatore, India	Agricultural Engineering	B.Engr., 1991
Indian Inst. of Tech.-Madras (IITM), Chennai, India	Water Resources Engineering	M.S., 1996
Tufts University	Water Resources Engineering	Ph.D., 2001
Columbia University	Hydroclimate and Water Resources	Postdoctoral, 2001-2004

Appointments

2015-Present Professor, Department of Civil Engineering, NCSU, Raleigh, NC
2011-2014 Associate Professor, Department of Civil Engineering, NCSU, Raleigh, NC
2005-2011 Assistant Professor, Department of Civil Engineering, NCSU, Raleigh, NC
2005-2015 Adjunct Research Scientist, IRI, Columbia University, New York, NY
2004-2005 Associate Research Scientist, IRI, Columbia University, New York, NY
2001-2004 Postdoctoral Research Scientist, IRI, Columbia University, New York, NY
2001 Instructor, Department of Earth Sciences, Boston University, Boston, MA
2000 Consultant, South Asia Environmental section, World Bank, Washington, DC
1997-2001 Research Assistant, Tufts University, Boston, MA
1995-1997 Senior Project Officer, Department of Civil Engineering, IITM, Chennai, India
1993-1995 Research Scholar, Department of Civil Engineering, IITM, Chennai, India

Relevant Products

Sankarasubramanian, A. and U. Lall, Flood Quantiles and Changing Climate: Seasonal Forecasts and Causal Relations, *Water Resources Research*, 39 (5), art.no.1134, 2003.
N. Devineni and A. Sankarasubramanian. Improving the Prediction of Winter Precipitation and Temperature over the Continental United States: Role of ENSO State in Developing Multimodel Combinations, *Monthly Weather Review*, 138:2447-2468, 2010.
Khan, M Z.H., R. Mehotra, A. Sharma and A. Sankarasubramanian, Global Sea Surface Temperature Forecasts Using an Improved Multi-model Approach, *Journal of Climate*, 27(10), 3505-3515, 2014.
Mazoorei, A., T. Sinha, A. Sankarasubramanian, S. Kumar and C. Peters-Lidard, Decomposition of Sources of Errors in Seasonal Streamflow Forecasting over the US Sunbelt, *Journal of Geophysical Research-Atmospheres*, 123 (23), 10.1002/2015JD023687, 2015.
S.B. Seo, T. Sinha, G. Mahinthakumar, A. Sanakrasubramanian, and M. Kumar, Identification of Dominant Source of Errors in Developing Streamflow and Groundwater Projection under Near-term Climate Change, *Journal of Geophysical Research – Atmospheres*, 121 (13), 7652-7672, 2016.

Other Significant Products

Oludhe, C., and A. Sankarasubramanian, T. Sinha, N. Devineni and U. Lall, The Role of Multimodel Climate Forecasts in Improving Water and Energy Management over the Tana River Basin, Kenya, *Journal of Applied Meteorology and Climatology*, 52(11), 2460-2475, 2013.

Sankarasubramanian, A., A. Wood, B. Rajagopalan, J.C. Schaake, AGU Chapman Conference - Seasonal to Interannual Hydroclimatic Forecasts and Water Management: Progress and Challenges, *Eos Transactions of AGU*, DOI: 10.1002/2014EO010004, 95(1), 2014.

Singh, H. and A. Sankarasubramanian, Systematic Uncertainty Reduction Strategies for Developing Streamflow Forecasts utilizing Multiple Climate Models and Hydrologic Models, *Water Resources Research*, 50(2), 1288-1307, 2014.

Sinha, T., and A. Sankarasubramanian, Role of Climate Forecasts and Initial Land-Surface Conditions in Developing Operational Streamflow and Soil Moisture Forecasts in a Rainfall-Runoff Regime: Skill Assessment, *Hydrology and Earth System Sciences*, 17, 721-733, 2013.

Sankarasubramanian, A., U. Lall, N. Devineni, and S. Espunheva, Utility of Operational Streamflow Forecasts in Improving within-season Reservoir Operation, *Journal of Applied Climatology & Meteorology*, 48(7), 1464–1482, 2009.

Synergistic Activities

Associate Editor, *Journal of Hydrometeorology* (2016-Present), *Journal of Hydrology* (2016-Present), *Water Resources Research* (2010-2015), *Journal of Hydrologic Engineering* (2010-2015); Editor, *Journal of Water and Climate Change* (2011-2014).

Lead Convener, AGU Chapman Conference on “Seasonal to Interannual Hydroclimate Forecasts and Water Management”, Portland, Oregon, August 2013.

Member of the American Geophysical Union & Chair for the AGU Technical Sessions: Freshwater, Ecosystem and Agriculture Sustainability under Climate and Land Use Changes (2011); Water Management under Nonstationary Climate: Can Decadal Predictions be useful? (2010); Multimodel Ensemble Forecasts for Climate and Streamflow (2007); Hydroclimatic Prediction and Water Management (2005); Surface Water Hydrology and Water Resources - Poster (2004 and 2005). Member of the American Society of Civil Engineers.

Panelist, National Science Foundation (2008, 2009, 2010, 2012, 2014); Proposal Review for NSF, Atmospheric Sciences (2007) and Hydrology (2006 and 2008); National Institute of Water Resources, USGS (2006 and 2009); National Oceanic and Atmospheric Administration (2006).

Technical Committees: Surface Water, Precipitation, Hydrology Section – AGU; Surface Water Hydrology – Environmental Water Research Institute (ASCE); Hydrology committee – AMS.

Published National Datasets: Vogel, R. M., and A. Sankarasubramanian. 2005. [USGS Hydro-Climatic Data Network \(HCDN\): Monthly Climate Database, 1951-1990](http://daac.ornl.gov/HYDROCLIMATOLOGY/guides/hcdn_monthly_hydroclim.html). Data set. Available [online](http://daac.ornl.gov/HYDROCLIMATOLOGY/guides/hcdn_monthly_hydroclim.html) from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, TN, U.S.A, (http://daac.ornl.gov/HYDROCLIMATOLOGY/guides/hcdn_monthly_hydroclim.html).