Groundwater recharge and flow: Approaches and challenges for monitoring and modeling using remotely sensed data: A Workshop

Committee

Venkat Lakshmi

Chair

Venkataraman Lakshmi, Chair, is a Carolina Trustee Professor at the University of South Carolina in the School of Earth Ocean and Environment. He served as the Cox Visiting Professor of Earth Sciences at Stanford University 2006-2007 and 2015-2016. His research interests are in the area of hydrometeorology and hydro-climatology, land-atmospheric-ecological interactions through modeling and remote sensing. Prior to his current position, he worked at NASA Goddard Space Flight Center as a research scientist in the Laboratory for the Atmospheres. Dr. Lakshmi has over 80 peer-reviewed articles and 300 presentations. He has served as the thesis advisor for around 25 graduate students. He has served as editor for Eos, associate editor of Water Resources Research, Journal of Hydrologic Engineering and Journal of Geophysical Research and currently is serving as Associate Editor of Journal of Hydrology and communications editor for Vadose Zone Journal. He is the founding editor-in-chief of the Remote Sensing in Earth System Science (Springer publication). He has served on the board of directors of the Consortium of Universities for the Advancement of Hydrological Sciences, the AGU Hydrological Executive Council and has been the co-chair for the Hydrology Section for the Fall Meeting. He has served as a member of the executive council for the AGU heads and chairs of Geosciences. Dr. Lakshmi is currently serving as a Program Director of Hydrologic Sciences at the National Science Foundation, a rotator position that will end in January 2019. He received his Ph.D. in civil and environmental engineering from Princeton University.

James S. Famiglietti

Member

James S. Famiglietti is a hydrologist, a professor with the School of Environment and Sustainability, and the Director of the Global Institute for Water Security at the University of Saskatchewan (U of S), where he holds the Canada 150 Research Chair in Hydrology and Remote Sensing. Before moving to the U of S, Dr. Famiglietti served for 4 years as the Senior Water Scientist at the NASA Jet Propulsion Laboratory (JPL) at the California Institute of Technology. Prior to working at JPL, he was a faculty member at the University of California, Irvine, and at the University of Texas at Austin. His research interests include how the water cycle and freshwater resources are being impacted by climate change. His research group developed advanced computer models and use satellite remote sensing to track water availability around the globe. Dr. Famiglietti's work has been incorporated into several of the world's leading global climate models, the complex numerical simulators used to predict and understand global change, and that provide the basis for assessment of future climate in the IPCC reports. Most recently, he and his students have pioneered methods using data from NASA's Gravity Recovery and Climate Experiment (GRACE) mission to identify groundwater depletion in the world's major aquifers. Dr. Famiglietti was the founding director of the UC Center for Hydrologic Modeling (UCCHM), a University of California system-wide center formed to develop state-of-the-art predictive models to address high-priority water issues in California and the Western United States. A fellow of the American Geophysical Union and of the Geological Society of America, he is a frequent speaker, an avid writer, and he is committed to science communication. Dr. Famiglietti is a regular advisor to state and federal government officials on water availability and water security issues, and his work is often featured in the international news media. He received a B.S. in geology from Tufts University and his M.S. in hydrology from the University of Arizona. He earned both his M.A. and Ph.D. in civil engineering at Princeton University.

Cathleen E. Jones

Member

Cathleen E. Jones is a radar scientist at NASA's Jet Propulsion Laboratory, California Institute of Technology, where her research is focused on using radar remote sensing for studying natural and man-made hazards. Her research includes development of methods for identifying hazards affecting flood control and water conveyance infrastructure, and for tracking and characterizing oil slicks to help in response and mitigation. She is one of four science team leads for the NASA NISAR mission, responsible for advancing utilization of the mission's data for societal benefit. She received a B.S. in physics from Texas A&M and a Ph.D. in physics from the California Institute of Technology.

Antarpreet Jutla

Member

Antarpreet Jutla is an associate professor of civil and environmental engineering at West Virginia University (WVU). Dr. Jutla has done extensive research on water and human interactions. He leads the Human Health and Hydro-environmental Sustainability Simulation Lab at WVU, an interdisciplinary research group that investigates how modalities of water (surface, groundwater), extreme natural events and enhanced climatic variability impact the emergence of water-borne pathogens that cause infection in humans. Through the use of satellite data, Dr. Jutla and his research team are able to create models that predict the distribution of pathogens in water across globe. Dr. Jutla earned his doctorate in civil and environmental engineering from Tufts University and master's degrees in civil and geological engineering and soil and water engineering from the University of Saskatchewan and Punjab Agricultural University, respectively. Before joining the faculty at WVU, he was a postdoctoral fellow at the National Oceanic and Atmospheric Administration. In 2018, he was awarded the prestigious CAREER award from the National Science Foundation to support his work. His work is funded by NASA's Applied Sciences Program/Health and Air Quality Applications program, National Institutes of Health, National Science Foundation and Department of Transportation.

Dennis P. Lettenmaier

Member

Dennis P. Lettenmaier (NAE) is a Distinguished Professor with interests in hydrologic modeling and prediction, hydrology-climate interactions, and hydrologic change. His research interests include hydrological (streamflow, snowpack) forecasting problems, particularly at seasonal and longer lead times, and hydrologic prediction problems, such as flood frequency analysis and the assessment of climate and land cover change on hydrological processes. In the modeling arena, he has been actively involved in development and testing of spatially distributed hydrological models applicable at the small catchment scale, using land surface attribute (vegetation, topography, and soils) information at scales as small as 10-100 meters. Dr. Lettenmaier has also been involved in development of macroscale rnodels applicable to simulation of the hydrology and land-atmosphere fluxes in large river basins, and in sorne cases, continentally and globally. He is an author or co-author of over 300 journal articles. He was the first Chief Editor of the American Meteorological Society Journal of Hydrometeorology, and is a past President of the Hydrology Section of the American Geophysical Union. He is a Fellow of the American Geophysical Union, the American Meteorological Society, and the American Association for the Advancement of Science. He received his B.S. degree in mechanical engineering and M.S. and Ph.D. degrees in civil engineering, all from the University of Washington.

Kamini Singha

Member

Kamini Singa is the Ben Fryrear Endowed Professor for Innovation and Excellence at the Colorado School of Mines, and serves as the Associate Department Head of the Department of Geology and Geological Engineering. She worked at the USGS Branch of Geophysics from 1997 to 2000, and served on the faculty of The Pennsylvania State University as an assistant and then associate professor from 2005 to 2012. Her research interests are focused in hydrogeology and environmental geophysics. Dr. Singha is the recipient of an NSF CAREER award, was awarded the Early Career Award from the Society of Environmental and Engineering Geophysics in 2009, served as the National Groundwater Association's Darcy Lecturer in 2017 and became a GSA Fellow in 2018. She earned her B.S. in geophysics from the University of Connecticut in 1999 and her Ph.D. in hydrogeology from Stanford University in 2005.

Lauren Everett

Staff Officer