



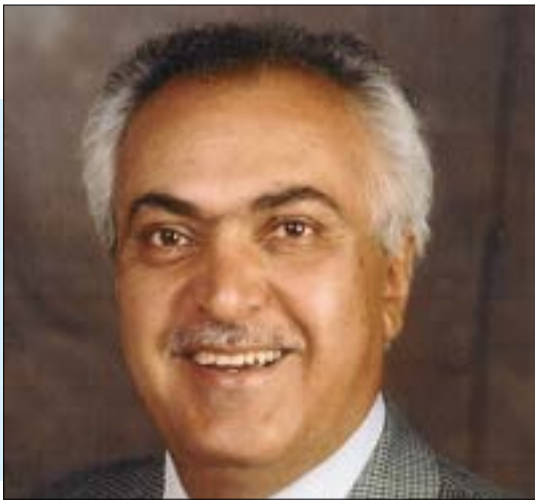
Environmental Science
& Policy Program
at Michigan State University

Distinguished Lecture Series

Dr. Soroosh Sorooshian

Distinguished Professor, Civil & Environmental Engineering and Earth System Science
Director, Center for Hydrometeorology and Remote Sensing (CHRS)
The Henry Samueli School of Engineering, University of California, Irvine

Climate Change and The Global Hydrologic Cycle: Efforts in Monitoring, Modeling and Ability to Forecast Changes



1:00 p.m.

Monday

February 27

Lake Superior Room

MSU Union

The need for more efficient use and effective management of water resources is a critical global issue facing the 21st century. At least three factors place special stresses and additional uncertainties on water resources planning, development and system operation strategies. First, rapid population growth is occurring in many regions of the developing world, including almost all semi-arid regions which cover 1/3 of the world's land mass. Second, growing prosperity over the last few decades, especially in countries which have experienced rapid population growth has impacted per capita water consumption rates and shifted demands in most regions. The third complication arises from the additional uncertainty resulting from global climate change and the resulting intensification of the hydrologic cycle. To be responsive to the need for more effective management of water resources, water resources managers must utilize more sophisticated planning tools including advanced observation systems and hydrologic prediction tools. A combination multi-purpose water resources supply systems and nonstructural approaches must be used and fine-tuned to local and regional conditions. On the information side, depending on the problems, the hydrologic information needed may range from hourly forecasts (i.e., in the case of flash floods) to seasonal to inter-annual (i.e., in the case of reservoir operation), and to decadal to century (i.e., in the case of water supply structural design). The presentation will provide a perspective on the above topics and some examples.