SAMUELI SCHOOL OF ENGINEERING
UNIVERSITY of CALIFORNIA · IRVINE
Department of Civil and Environmental Engineering

ENVIRONMENTAL ENGINEERING SEMINAR SERIES

FRIDAY, DECEMBER 6TH FROM 1:30PM-2:20PM

MCDONNELL DOUGLAS AUDITORIUM (MDEA)

Revisiting the Principals of Water Resource Management Under Uncertain Conditions:

What to Do When Predictions are Wrong?

Presented By: Dr. Ali Nazemi

Global Institute for Water Security—University of Saskatchewan

Born in Italy, raised in Iran, he got his PhD from University of Birmingham UK, looking at calibration of conceptual models using multi-objective evolutionary algorithms. He moved to Canada in 2009 as a postdoctoral research fellow and since then he has focused on various aspects of water security in northern regions, including risks in oil-sand reclamation, extreme rainfall under global warming conditions and vulnerability of water resource systems to both climate variability and change. He is now a research associate at the Global Institute for Water Security, University of Saskatchewan, and mainly thinks about how to include water resource management in large-scale models that are used for climate and hydrological predictions.

Abstract:

Water resource management is a complex interaction among various factors, including water availability, water demand and socio-economic values. Substantial increase in the extent of human water use has occurred in the past recent. This coincides with major shifts in socio-economic values and high variability in water availability through time and space. Our knowledge about global and regional water availability often comes from a cascade of climate and hydrological predictions. This knowledge is limited and highly uncertain as there are known limitation in climate models and wide-range of uncertainties in hydrological models. By focusing on the water resource system of Canadian Prairies, it will be discussed

(1) How much the state-of-the-art water supply predictions can be off from reality;

(2) How much the errors and uncertainty in water supply can propagate into the water resource management decisions; and finally

(3) How these limitations can be reduced if we look differently at water resource management under uncertain conditions.

Graduate Student Coffee Hour—Meet The Lecturer

2:30PM—Java City

Questions?

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