

# Environmental Engineering Seminar

---

*The Department of Civil and Environmental Engineering presents*



**Professor Amir AghaKouchak**  
**University of CA, Irvine**

Date: September 8, 2017

Time: 3:00-4:00 pm

Place: WPH B27

## **Compound and Concurrent Climate Extremes: Detection, Modeling and Risk Analysis**

Human activities in the past century have caused an increase in global temperature. Ground-based observations show a substantial increase in extreme rainfall events, hot spells and heatwaves. A combination of climate events (e.g., low precipitation and high temperatures) may cause a significant impact on the ecosystem and society, although individual events involved may not be severe extremes themselves – a notion known as compound extremes. Numerous studies have focused on how different types of extremes have changed or might change in the future. However, only few studies have addressed changes in compound and concurrent events. This presentation focuses on three different types of concurrent and compound extremes including drought-heatwaves, sea level rise-terrestrial flooding, and meteorological-anthropogenic drought. We present different methodological frameworks for detecting, modeling and risk assessment of concurrent and compound extremes.

### **About the Speaker**

Amir AghaKouchak is an Associate Professor of Civil and Environmental Engineering at the University of California, Irvine. His research focuses on climate extreme and crosses the boundaries between hydrology, climatology, remote sensing. His group has developed models for monitoring and assessing climatic extremes including the Global Integrated Drought Monitoring and Prediction System (GIDMaPS). He is the Principal Investigator of several federally funded grants from NASA, NSF, and NOAA. He is currently Editor of AGU's Earth's Future. Website:

<http://amir.eng.uci.edu/>

