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Department of Civil and Environmental Engineering  
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## Hydrological Modeling in Alpine Catchments on the Tibetan Plateau

Presented by:

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**Date and Time: August 10, 3:00-4:30pm**

**Location: Holmes 287**

### **Abstract:**

The Tibetan Plateau contains more than 100,000 km<sup>2</sup> of glaciers and over 10 major river of Asia which are most sensitive and visible indicator of climate change. Besides the water quantity issues, the Tibetan Plateau is broadly affected by soil erosion, which shows complex and diverse characteristics due to coexistence of water erosion and freeze-thaw erosion. This study developed modeling approaches for air temperature estimation from remote sensing land surface temperature data, snow cover and stream flow simulation with consideration of temperature lapse rate and precipitation gradient in the high mountain area, and sediment transport modeling based on the sediment rating curve method with data scarcity to help understand the hydrological processes on the Tibetan plateau.

### **Speaker Biography:**

Dr. Fan Zhang is currently a professor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences and the Associate Editor of ASCE - Journal of Hydrological Engineering. Dr. Zhang received her Ph.D. degree in Civil Engineering from the University of Central Florida in 2005 and served as a Research Associate and then Research Staff Scientist of the Environmental Sciences Division in the Oak Ridge National Laboratory until she moved back to Beijing in 2009. Dr. Zhang's research focuses on computational fluid dynamics, surface and ground water hydrology, geochemical equilibrium and kinetics. She has published over 30 journal papers.