

# Dr. Yadu Pokhrel

Assistant Professor

Department of Civil and Environmental Engineering

College of Engineering



Dr. Yadu Pokhrel is an assistant professor in the Department of Civil and Environmental Engineering at Michigan State University. He joined the Civil and Environmental Engineering faculty in 2014.

Dr. Pokhrel's research focuses on improving the understanding of the changes in the global and regional water cycle in response to the combined effects of human activities and climate change. In particular, the changes in various components of the hydrological cycle as caused directly by human activities – such as land use and land cover change, reservoir operation and large-scale diversion of water, irrigation, and groundwater pumping – constitute the foundation of his research. The primary focus of his research is on representing these human factors into global/regional hydrologic, climate, and Earth system models in order to develop holistic and integrated hydrological/water resources models that can be used to address pressing societal problems of water resources and agricultural sustainability. Dr. Pokhrel integrates various in-situ and satellite-based observations into these models to study coupled natural-human systems and the feedback and interactions among them. His goal is to use the new models to address problems related to climate change and water resources and agricultural sustainability at global to regional scales.

Dr. Pokhrel attended Tribhuvaan University in Nepal for his bachelor's degree in Civil Engineering. He went on to complete his Master's and Ph.D. at the University of Tokyo, Japan, and worked first as a research associate and then as a research assistant professor at Rutgers University in New Jersey before moving to Michigan.

## **Global research interests**

- Developing a better understanding of the water cycle in the context of changing climate and increasing human pressure on available water resources
- Developing integrated water cycle models for the holistic study of the changes in water cycle and human water use
- Integration of remote sensing data into hydrological models
- Global water resources and food sustainability for the 21st century
- Sustainability of groundwater resources in highly managed agroecosystems

## **Geographic focus**

- Asia
- Amazon river basin
- North America