The Department of Civil and Environmental Engineering at the University of Houston presents...

CIVE 6111 Graduate Seminar

Humans, rivers, and climate change

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Department of Civil & Environmental Engineering at the University of Washington

Friday, March 24, 2023
2:45pm-3:45pm
Classroom Business Building (CBB) - Room 104
Zoom: https://uh-edu-cougarnet.zoom.us/j/94589160391

Abstract

The effects of climate change are strongly felt in the hydrological cycle, where changes in extremes, volumes, timing, and water quality pose challenges for water resources management. Most hydrological projections under climate change rely on computer models that do not adequately represent the role of humans as active agents in the hydrological cycle. Two case studies are presented to illustrate the need to account for water resources management in assessing climate change impacts on hydrology. Both studies rely on a complex model chain to estimate climate change impacts with and without the effects of water resources management. One study is focused on streamflow and stream temperature in the southeastern United States. The other examines streamflow in the Columbia River, which is the main source of hydropower in the Pacific Northwest.

Bio

Bart Nijssen is the Allan & Inger Osberg Professor and Chair of Civil and Environmental Engineering at the University of Washington, Seattle. His research career has focused on the development and application of models and analytical techniques to better understand and predict hydrologic processes near the land surface and to better understand how our planet will respond to change. He has contributed to the development, maintenance and distribution of hydrologic models (e.g. DHSVM, VIC, and SUMMA) that are widely used in the hydrology community and has championed the use of standard software development methods in hydrological research to promote reproducibility. In 2021, he was awarded the Edward A. Flinn III Award from the AGU in recognition for his work in developing and sharing open-source models and datasets.