

Machine learning and mechanistic modeling in hydrology: successes and ongoing challenges

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Abstract

This talk will explore the state of machine learning in hydrology, specifically as relates to the combination of machine learning and physically based hydrologic models. I will provide some discussion of my own work in this area, building emulators of large-scale groundwater models, and exploring the use of machine learning to accelerate simulation-based inference. More broadly though, I will discuss the general trends in machine learning for hydrologic modeling and the greatest outstanding needs. The goal of this talk is to be a starting point for discussing the greatest opportunities for information theory in this area.

References/Recommended reading

later