# Dr. Vipin Kumar

## Big Data in Climate and Earth Sciences: Challenges and Opportunities for Machine Learning

A massive amount of data about Earth and its environment is continuously being generated by a large number of Earth observing satellites as well as physics-based earth system models running on large-scale computational platforms. These datasets offer huge potential for understanding how the Earth's climate and ecosystem have been changing and how they are being impacted by humans' actions. This talk will discuss various challenges involved in analyzing these massive datasets as well as opportunities they present for both advancing machine learning as well as the science of climate change in the context of monitoring the state of the tropical forests and surface water on a global scale.

## April 19th, 4-5 p.m., Taper Hall (THH) 301

This lecture satisfies requirements for

CSCI 591: Research Colloquium.

Dr. Vipin Kumar is a Regents Professor and holds William Norris Chair in the department of Computer Science and Engineering at the University of Minnesota. His research interests include data mining, high-performance computing, and their applications in climate/ecosystems and health care. He is currently leading an NSF Expedition project on understanding climate change using data science approaches.