

Emergent Research: The PIMS Postdoctoral Fellow Seminar

May 19, 2021

9:30 AM Pacific / 10:30 AM Mountain / 11:30 AM Central
Zoom

PIMS is pleased to present an ongoing lecture series featuring our Postdoctoral Fellows! Every three weeks, you will have the opportunity to connect with emerging research in the mathematical sciences from a PIMS Postdoctoral Fellow. PIMS PDFs are amongst the top young researchers in Canada, and this is an excellent opportunity to learn about them, and their work.



Chandra Rajulapati

PIMS Postdoctoral Fellow - University of Saskatchewan
Data Accuracy for Risk Management in Changing Climate

ABSTRACT:

The decade of the 2010s was the hottest yet in more than 150 years of global mean temperature measurements. The key climate change signatures include intensifying extreme events such as widespread droughts, flooding and heatwaves, severe impacts on human health, food security, ecology, and species biodiversity. Climate has been changing from iceage and is expected to change in future, yet the rate of change is alarming. Data plays a crucial role in developing risk management, mitigation and adaptation strategies under changing climate conditions. This talk focuses on uncertainties in hydrological data and the subsequent effect on extreme events like floods, droughts and heatwaves. Projected changes along with apparent biases in the global climate models, tools available for understanding future climate, are discussed. Importance of understanding uncertainties in observations and simulations and the need to probabilistically evaluate simulations to identify those that agree with observations is emphasized. Finally, the effect of data accuracy and incorporating uncertainty in informed decisions and risk management strategies is highlighted through a case study.

SPEAKER BIOGRAPHY:

Chandra Rajulapati is a GWF-PIMS PDF, working with Dr. Simon Papalexou at the Global Institute for Water Security (GIWS), University of Saskatchewan, on the Global Water Futures (GWF) project. She obtained her doctoral degree from the Indian Institute of Science (IISc) Bangalore, India, under the supervision of Prof. Pradeep Mujumdar. Her research focuses on understanding historical and future changes in hydroclimatic variables like precipitation and temperature at different scales, estimating risk due to extreme events like floods, droughts and heatwaves, and developing sustainable water management systems, risk assessment, adaptation and mitigation strategies.

REGISTRATION: <https://www.pims.math.ca/seminars/PIMSPDF>