



शिक्षा मंत्रालय
MINISTRY OF
EDUCATION

सत्यमेव जयते



COEAI-SPARC Workshop on Hybrid Physics-AI Systems for Climate, Weather and Water

Date: 19-21 June, 2024

Venue: IIT Kharagpur

Organizers:

- Dr. Adway Mitra (Centre of Excellence in Artificial Intelligence, IIT Kharagpur)
- Prof. Auroop Ganguly (Civil and Environmental Engineering, Northeastern University)

Description of the Event: As the threat of climate change looms over the world, it is more important than ever to be able to predict extreme weather events at adequate lead times and high spatial resolution, but also understand future trends of climate under various scenarios. Traditionally, these tasks have been done using physics-based process models. But the great advances in Artificial Intelligence and Machine Learning have the potential to revolutionize this field by harnessing the power of remotely sensed data. The aim of this workshop is to bring together both climate scientists and data scientists, to develop an agenda of how AI/ML can be used to improve the scientific models for weather, climate and hydrology.

Keynote Talks:

- 1) Dr. Bhupendranath Goswami - SERB Distinguished Fellow, Former Director, IITM Pune
- 2) Dr. Forrest Hoffmann - Oak Ridge National Laboratory, USA

Invited speakers:

- 1) Prof. Subimal Ghosh (Indian Institute of Technology, Bombay)
- 2) Prof. Abhijit Mukherjee (Indian Institute of Technology, Kharagpur)
- 3) Prof. Anuj Karpatne (Virginia Tech, USA)
- 4) Dr. Bipin Kumar (Indian Institute of Tropical Meteorology, Pune)
- 5) Prof. V. Vinoj (Indian Institute of Technology, Bhubaneswar)
- 6) Prof. Arpita Mandal (Indian Institute of Technology, Bombay)
- 7) Prof. Udit Bhatia (Indian Institute of Technology, Gandhinagar)
- 8) Prof. Jatin Batra (Tata Institute of Fundamental Research, Mumbai)

Student participation: 25 from outside IITKGP, any number from IITKGP (Masters and above)

Student events: poster presentation with 5 minutes lightning talks (physical or virtual)

Two Best Poster Awards - Process Modeling Track, AI Modeling Track