1-Day Early Career Researcher Workshop 2023
September 27, 2023
Emerging Hydroclimatic Extremes and Approaches
Highlights of the Event

The 1-day event **Early Career Researcher Workshop 2023** is organized by the Department of Hydrology, Indian Institute of Technology, Roorkee on September 27, 2032 in coordination with iDRIM 2023, CoEDMM and YHS India. The workshop emphasized the theme of "*Emerging Hydroclimatic Extremes and Approaches*". This event, coordinated by DAAD Research Ambassadors Prof. Ankit Agarwal and Prof. Ashutosh Sharma from the Department of Hydrology at IIT Roorkee and Prof. Amar Agarwal from the Earth Science Department at IIT Kanpur, achieved its threefold mission:

1. ***Exploring Cutting-Edge Research***: Participants delved into current and future research in HydroClimatology, Extremes, and Data Analysis.

2. ***Fostering Dialogue and Networking***: The workshop facilitated discussions and networking opportunities among like-minded researchers.

3. ***Skill Development***: Early career researchers honed their skills through theoretical and hands-on sessions, supported by shared study materials, software, and data.

The workshop featured morning and afternoon sessions, each comprising theoretical and practical components. In the morning session of the event, Prof. Ankit Agarwal presented about characteristics and drivers of compound extremes. Dr. Pankaj Dey, IIT Roorkee presented the data-driven investigation of causal relationship in which he discussed about the use of artificial neural networks in the hydroclimatic extremes. Followed by the practical hands-on session which was conducted by Mr. Ravi Kumar Guntu, DAAD Alumni, who described the flood prediction approaches with time series data using MATLAB. The session ended with an interactive discussion.

In the post-lunch session, Prof. Amar Agarwal, IIT Kanpur discussed the structural controls of landslides in the Himalayas. Through the hands-on session, they demonstrated the processing of data collected using drones for landslide prediction and mapping. They described that the orientation and slope are highly important in predicting landslides. The session ended with an collaborative discussion.

In the evening, open science and discussion were held. During this session, many scientific aspects were discussed. In addition, various DAAD opportunities were also discussed where the interested researchers can find various opportunities for their future research. Prof Brijesh Kumar, Head of Department distributed the certificates to the participants. Prof. Ankit Agarwal thanked everyone for the successful completion of the event. This event epitomized collaborative learning in the field of HydroClimatology.