IIT Roorkee

University of Potsdam

Indian Institute of Technology - Roorkee is among the foremost institutes of national importance in higher technological education and in engineering, basic and applied research. Since its establishment in 1857, the Institute has played a vital role in providing the technical manpower and know-how to the country and in pursuit of research. The Institute ranks amongst the best technological institutions globally and has made stellar contributions in research and development in its long history of 175 years. During each stage of its evolution from Thomson College of Civil Engineering (1854), University of Roorkee (1949) and Indian Institute of Technology Roorkee (2001), it has been considered a trend-setter in the area of education and research in the field of science, technology and engineering.

The **University of Potsdam** is Brandenburg's largest university and the fourth largest in the Berlin-Brandenburg metropolitan area. It was formed in 1991 by the amalgamation of the Karl Liebknecht College of Education and the Brandenburg State College and several other smaller institutions. As the university largely emerged from the College of Education, the emphasis today is still placed on teacher training. More than 8,000 people are working in scholarship and science. In 2009, the University of Potsdam became a winner in the "Excellence in Teaching" initiative of the Stifterverb and für die Deutsche Wissenschaft (Business innovation agency for the German science system).

Department of Hydrology, IIT Roorkee

The Department of Hydrology came into existence with the inception of the International Post Graduate Course in Hydrology in 1972, the first such programme in a developing country. The Government of India and UNESCO presently sponsors the courses offered by the Department. The Department has nine dedicated full-time faculty members specialising in surface water hydrology (Floods, Droughts), water resources systems, watershed management, Geo-hydrology, groundwater geophysics, stochastic hydrology, hydro-informatics, environmental hydrology, atmospheric physics, climate change, Remote Sensing and GIS Applications etc.

Steering Committee

Patrons	**Prof. Ajit Kumar Chaturvedi**, Director of the Indian Institute of Technology, Roorkee **Prof. Oliver Günther**, President of the University of Potsdam, Germany
Chairs	**Prof. Brijesh Yadav**, Head, Department of Hydrology, IIT Roorkee **Prof. Axel Bronstert**, Director of the Institute for Environmental Sciences and Geography
Convener	**Prof. Ankit Agarwal**, Department of Hydrology, Indian Institute of Technology, Roorkee
Organizing Secretaries	**Dr Jurgen Mey**, University of Potsdam **Dr Divya Sharma**, Indian Institute of Technology, Roorkee **Dr. Ugur Ozturk**. GFZ German Research Centre for Geosciences, Germany

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1. Prof. N. K. Goel, Department of Hydrology, Indian Institute of Technology, Roorkee
2. Prof. Dr. Bruno Merz, Hydrology, Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences
3. Prof. Oliver Korup, Institute of Environmental Science and Geography, University Of Potsdam
4. Prof. Manoj Jain, Department of Hydrology, Indian Institute of Technology, Roorkee
5. Prof. Dr. Anegrete Theiken, Geography and Natural Risk Research, University of Potsdam, Germany
6. Prof. Mahua Mukharjee, Department Of Architecture and Planning, Indian Institute of Technology Roorkee
7. Prof. Himanshu Joshi, Department of Hydrology, Indian Institute of Technology, Roorkee
8. Prof. Ashish Pandey, Water Resource Development and Management, Indian Institute of Technology, Roorkee
9. Dr Norbert Marwan, Deputy Head of Research Department, Potsdam Institute for Climate Impact Research, Germany

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DAAD Deutscher Akademischer Austauschdienst German Academic Exchange Service

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Co-PREPARE
Collaborative Indo-German PRoject on Estimating and Predicting NAtural Hazards in the Himalayan REgion

Co-PREPARE

25th to 28th October

10.30-14.30pm CEST/

14.00-18.00 IST

NSIH 2021

Natural-hazard Symposium for the Indian Himalayas

Universität Potsdam

Keynote Talks

The keynote talks will be given by experts on the emerging hydro-climatological extremes, risk, vulnerability and adaptation in the Indian Himalayan Region.

Panel Discussions

Panel discussions will focus on the future of research in Indian Himalayas and try to highlight the multidisciplinary aspect of the natural-hazard domain

Presentations by Early Career Researchers

The early career researchers will give presentation on compound extremes, bedload transportation and out bust of moraine- dammed lakes in the Indian Himalayan Region.

Hands-on Training

Co-PREPARE believes in fostering the scientists of the future and as such, we are pleased to extend Co-PREPARE Conference Grant (CAG) for early career researchers to participate in Hands-On Session. Eligible candidates will be selected for CAG to participate in Hands-on sessions.

Day 1	Opening Day		
Session1	Inaugural Ceremony		
	IST	CEST	
	14:00 - 14:35	10:30 - 11:05	Welcome Session
	14:35 - 15:45	11:05 - 12:15	Plenary Talk and discussion
	15:45- 16.00	12:15 -12:30	Break
Session 2	Panel Discussion		
	16:00 to 18:00	12:30 - 14:30	Future directions for research on Himalayan Region
Day 2	**Theme: Emerging HydroClimatological Extremes**		
Session 3	Key Talks		
	14:00 – 15:00	10:30 - 11:30	Key Talks
	15:00 - 15:30	11:30 - 12:00	Interaction and future research directions
	15:30- 16:00	12:00 - 12:30	Break
Session 4	Presentation by Early Career Researchers		
	16:00 to 18:00	12:30 - 14:30	Presentations by Researchers
Day 3	**Risk, vulnerabilities and adaptation in the Himalayas**		
Session 5	Key Talks		
	14:00 – 15:00	10:30 - 11:30	Key Talks
	15:00 - 15:30	11:30 - 12:00	Interaction and future research directions
	15:30- 16:00	12:00 - 12:30	Break
Session 6	Hands-on session		
	16:00 to 18:00	12:30 - 14:30	A hands-on session for Early Career Researchers
Day 4	**Panel discussion and hands-on-session**		
Session 7	Panel Discussion		
	14:00 – 15:40	10:30 - 12:10	Panel Discussion IYWN (Indian Youth Water Network)
			"Breaking Silos: Future of water research for Himalayas"
Session 8	Valedictory Session		
	15:40- 16:00	12:10 - 12:30	Vote of Thanks

Introduction

Natural hazard domain in the Indian Himalayan ecosystem poses unique challenges. To synergize research work in the IHR with focus on natural-hazard, it is important to create platforms where researchers can discuss diverse perspectives to break the silos. The Indian Himalayan Subsystem has to be investigated through various lenses like hydrology, geomorphology, climatology, disaster mitigation, adaptation, response and recovery. Being young and tectonically active, IHR requires focus on synergized efforts and hence, calls for an enhanced partnership of institutions working in the region.

CoPREPARE

Co-PREPARE is a newly established UGC and DAAD-funded project at the department of Hydrology, IIT Roorkee and Institute for Environmental Sciences and Geography, University of Potsdam, Germany focusing on natural hazards in the Indian Himalayan region. Co-PREPARE facilitates cooperation between Indian Institute of Technology Roorkee (IIT Roorkee) and University of Potsdam (UP) to build capacity in joint hazard research by sharing expertise and creating new knowledge together.

NSIH 2021

The planned "Natural-hazard symposium for Indian Himalaya 2021" from October 25 to October 28, 2021 aims to create awareness of multiple perspectives and research domains in the Indian Himalayan region regarding natural hazards. The Indian Himalayan Region represents a significant role in the world's mountain ecosystems. It is young and tectonically active, prone to multi-hazard like floods, landslides, earthquakes among others and suffers great loss of life and property every year. Natural hazard frequency has risen in recent decades in IHR, resulting in massive socio-economic losses.

At the symposium, we will discuss the current research findings in the Natural-hazard domain in the Indian Himalayan region. We will also try to understand the historic perspective from the experts and how they see the future scenarios. The symposium will be a platform where we will get to hear voices from all the domains involved in natural hazards i.e. practitioners, scientists and the younger generation entering this field.

Sessions are designed to highlight that there is a need for wider collaboration to create relevant policies. The intention is to create a dialogue among various practitioners and researchers active in the Himalayan region. These discussions will provide guidelines for future research of natural-hazard domain in the Indian Himalayas. NSIH 2021 also focuses on developing new skills for early career researchers through hands-on training which will bring a fresh perspective in the research domain hence advancing science-communication.

Aim: To create awareness of multiple perspectives and research domains in the Indian Himalayan region regarding natural hazards.

Interdisciplinary and international collaborative efforts enhance scientific discovery and transnational research, which is limited despite the clear benefits.