



Emerging Space Technology Applications for Compound Extremes 2022 (STAC-X 2022)



Organized by
Department of Hydrology, Indian Institute of Technology Roorkee

Minute to Minute Programme of STAC-X 2022 at the
Conference Hall, Department of Hydrology
Date: 9th to 20th May, 2022

May 09, 2022 (Day 1, Monday)		
9.00 AM- 9.40 AM	INAUGURAL SESSION	
9.00 AM - 9.05 AM		Introduction and ushering in of the Dignitaries
9.05 AM - 9.10 AM		Welcome by Prof. Ashutosh Sharma (Course coordinator)
9.10 AM -9:15 AM	Welcome and training program overview	Prof. Ankit Agarwal (Course Director) IIT Roorkee
9.15 AM- 9.20 AM	Address by	Prof. Brijesh Yadav Head, Department Of Hydrology, IIT Roorkee
9.20 AM- 9.30 AM	Address by	Prof. Ajit Kumar Chaturvedi Director, IIT Roorkee
9.30 AM- 9.35 AM	Introduction of Participants	Coordinated by Prof. Ashutosh Sharma (Course coordinator)
9.35 AM- 9.40 AM	Vote of Thanks	Prof. Ankit Agarwal (Course Director) IIT Roorkee
9.40 AM-10.15 AM	Group Photo and Tea in Dept. of Hydrology Lawn	
10:15 AM-11:00 AM	Keynote lecture I and Discussion "Hydrological Disaster and Risk Reduction in Changing Climate" (Prof. Sharad Jain, IITR)	
11.00 AM -11.45 AM	Keynote lecture II and discussion: "Geo-spatial Technology Applications in Water Resource and Hydrology: With focus on Hydro-Meteorological Hazards." (Dr. Praveen K. Thakur, IIRS)	
11: 45 AM - 12.00 PM	Quick Remarks and Instructions	
	Lunch Break	
2. 00 PM - 5.00 PM	Geo-portal for spatial-temporal satellite data/products availability from multi mission. (Prof. D. S. Arya, IITR)	
May 10, 2022 (Day 2, Tuesday)		
9.00 AM – 12.00 Noon	Introduction to Satellite Precipitation Products, processing, evaluation and validation. (Prof. Kasi Vishwanathan, IITR)	
2.00 PM – 5.00 PM	Training on satellite based precipitation, temperature and soil moisture products. (Dr. Vishal Singh, NIH Roorkee)	
May 11, 2022 (Day 3, Wednesday)		
9.00 AM – 12.00 Noon	Applications of DEMs in Hydrological Extremes. (Prof. Alok Bhardwaj, IITR)	
12.00 Noon – 2.00 PM	Lunch Break	
2.00 PM – 5.00 PM	Geospatial Datasets for Modelling of hydrological Extremes. (Prof. Sumit Sen, IITR)	
May 12, 2022 (Day 4, Thursday)		
9.00 AM – 12.00 Noon	Drought characterization and propagation over Indian subcontinent. (Prof.	

	Vinnarasi Rajendran, IITR)
12.00 Noon – 2.00 PM	Lunch Break
2.00 PM – 5.00 PM	Estimation of water level using satellite altimetry data: Investigation of altimeter observations and hydrodynamic modelling in river flow estimation. (Dr. Pankaj Ramji Dhote, IIRS)
May 13, 2022 (Day 5, Friday)	
9.00 AM – 10.30 AM	Assessment of Potential Sub-surface sites for CO ₂ geosequestration using remote sensing for climate change mitigation. (Prof. Brijesh Kumar Yadav, IITR)
10.30 AM – 12.00 Noon	Open Discussion (Prof. Himanshu Joshi; Prof. Bhaskar J. Deka, IITR)
12.00 Noon – 2.00 PM	Lunch Break
2.00 PM – 4.00 PM	Visualization of the few dataset in QGIS software and Google Earth Engine (GEE), statistical applications using programming on Python/ R. (Prof. Roopam Shukla, IITR)
4.00 PM – 5.00 PM	Self-Assessment and open house
May 14, 2022 (Day 6, Saturday) Field Trip to Tehri dam	
May 15, 2022 (Day 7) (Holiday, Sunday)	
May 16, 2022 (Day 8, Monday)	
9.00 AM – 12.00 Noon	Understanding the concept of Compound Extremes: Disentangling increasing compound extremes at regional scale focusing on the utilization of SPPs. (Prof. Ankit Agarwal, IITR)
12.00 Noon – 2.00 PM	Lunch Break
2.00 PM – 5.00 PM	River flow estimation using remote sensing data: Opportunities and challenges. (Prof. Manoj Jain, IITR)
May 17, 2022 (Day 9, Tuesday)	
9.00 AM – 12.00 Noon	Remote sensing of snow and glaciers. (Prof. Ajanta Goswami, IITR)
12.00 Noon – 2.00 PM	Lunch Break
2.00 PM – 5.00 PM	Remote sensing data and methods to study glacier lake outburst floods and compound extremes. (Prof. Saurabh Vijay, IITR)
May 18, 2022 (Day 10, Wednesday)	
9.00 AM – 12.00 Noon	Ecosystem functioning and responses to hydro climatic extremes. (Prof. Ashutosh Sharma, IITR)
12.00 Noon – 2.00 PM	Lunch Break
2.00 PM – 5.00 PM	Rainfall triggered landslides (Remote sensing and compound extremes). (Prof. Siva S. S Srikrishnan, IITR)
May 19, 2022 (Day 11, Thursday)	
9.00 AM – 12.00 Noon	Utilizing geospatial data and tools for flood risk assessment. (Prof. Mohit Mohanty, IITR)
12.00 Noon – 2.00 PM	Lunch Break
2.00 PM – 5.00 PM	Advances in Flood Frequency Analysis using Space-based Technologies. (Prof. N. K. Goel, IITR)
May 20, 2022 (Day 12, Friday)	
9.00 AM – 12.00 Noon	Presentation by candidates coordinated by Prof. Himanshu Joshi
12.00 AM – 12.30 Noon	VALEDICTORY SESSION