

Program schedule for 3-Week Capacity Building Program in Glaciology

From 11th September to 30th September, 2023

Venue: Theory/practical at University of Kashmir and Fieldwork at Machoi Glacier site in Ladakh

Date	Time	Topic	Resource Person	Affiliation
Day-1, 11th Sep, 2023 (Monday)	1000 -1050 hrs	Inauguration		
	1050-1115 hrs	TEA BREAK		
	1115-1200 hrs	Introduction of the Program: Aims, objectives and expectations from the training program	Prof. Shakil A. Romshoo	University of Kashmir, IUST
	1200-1300 hrs	Glaciers and Glaciation-I	Dr. Reyaz Ahmad Dar	University of Kashmir
	1300-1400 hrs	LUNCH BREAK		
	1400-1500 hrs	Glaciers and Glaciation-II	Dr. Reyaz Ahmad Dar	University of Kashmir
	1500-1515 hrs	TEA BREAK		
	1515-1630 hrs	Cryosphere: Status, monitoring and assessment	Prof. Shakil A. Romshoo	University of Kashmir
Day-2, 12th Sep 2023 (Tuesday)	0930-1030 hrs	Remote sensing of Himalayan Cryosphere	Dr. Babu Govindha Raj K	ISRO, Bengaluru
	1030-1045 hrs	TEA BREAK		
	1045-1145 hrs	CRN dating approach to understand glacial landforms	Dr. J K Pattanaik	Central University of Punjab
	1145-1245 hrs	Glacier Mapping from Remote Sensing Data	Dr. Khalid Omar Murtaza	University of Kashmir
	1245-1345 hrs	LUNCH		
	1345-1445 hrs	Exercise- Glacier Inventory and derivation of glacier parameters from remote sensing data	Dr. Khalid Omar Murtaza, Dr. Tariq Abdullah, Dr. Bashrat	University of Kashmir
	1445-1500 hrs	TEA BREAK		
	1500-1630 hrs	Exercise- Glacier Inventory and derivation of glacier parameters from remote sensing data	Dr. Khalid Omar Murtaza, Dr. Tariq Abdullah, Dr. Bashrat	University of Kashmir

Day-3, 13th Sep 2023 (Wednesday)	0930-1030 hrs	East Antartic Ice sheet and Melt water pulses	Dr. J K Pattanaik	Central University of Punjab
	1030-1045 hrs	TEA BREAK		
	1045-1145 hrs	Cryospheric Hazards	Dr. Babu Govindha Raj	ISRO
	1145-1245 hrs	Glacier Ice Reserve Assessment	Dr. Tariq Abdullah	University of Kashmir
	1245-1345 hrs	LUNCH		
	1345-1445 hrs	Exercise- Glacier volume assessment: Multiple approaches	Dr. Tariq, Dr. Khalid Omar, Mr. Ummer Amin, Mr. Mustafa	University of Kashmir
	1445-1500 hrs	TEA BREAK		
	1500-15:300 hrs	Exercise- Glacier volume assessment: Multiple approaches	Dr. Tariq, Dr. Khalid Omar, Mr. Ummer Amin, Mr. Mustafa	University of Kashmir
	1530-1630 hrs	Mini project assignment and grouping	Prof. Shakil Ahmad Romshoo, Dr. Khalid, Dr. Tariq, Dr. Bashrat	University of Kashmir
Day-4, 14th Sep 2023 (Thursday)	0930-1030 hrs	Melting cryosphere under changing climate in North-western Himalaya	Prof. Shakil A. Romshoo	University of Kashmir
	1030-1045 hrs	TEA BREAK		
	1045-1145 hrs	Remote Sensing of Snow and Ice	Prof. Anil V. Kulkarni	IISc, Bangalore
	1145-1245 hrs	Atmospheric rivers and snowfall over Himalaya	Dr. Munir Ahmad Nayak	NIT, Srinagar
	1245-1345 hrs	LUNCH BREAK		
	1345-1445 hrs	Himalayan Cryosphere under Warm Climate	Prof. Anil V. Kulkarni	IISc, Bangalore
	1445-1500 hrs	TEA BREAK		
	1500-1630 hrs	Exercise- Remote sensing based glacier snowline mapping and calculation of ELA and AAR	Dr. Khalid, Dr. Tariq, Dr. Bashrat	University of Kashmir
Day-5, 15th Sep 2023 (Friday)	0930-1030 hrs	Snow Hydrology and Glaciological Studies using Satellite Remote Sensing and Modelling Techniques	Dr. Praveen Kumar Thakur	IIRS, Dehradun
	1030-1045 hrs	TEA BREAK		

	1045-1145 hrs	Exercise Snow cover and Glacier Dynamics Estimation using SAR data	Dr. Praveen Kumar Thakur	IIRS, Dehradun
	1145:1245 hrs	Field based Monitoring of Indian Himalayan Glaciers under Changing Climate	Dr. Harish Chandra Nainwal	HNB Garhwal University
	1245-1345 hrs	LUNCH		
	1345-1445 hrs	Glacial Geomorphology- Exercises	Dr. Harish Chandra Nainwal	HNB Garhwal University
	1445-1500 hrs	TEA BREAK		
	1500-1530 hrs	Glacial Geomorphology- Exercises	Dr. Harish Chandra Nainwal	HNB Garhwal University
	1530-1630 hrs	Isotope Applications for Glaciological Studies and its importance for Hydrological Problems	Prof. R.D. Deshpande	PRL, Ahmedabad
Day-6&7, 16th -17th Sep, 2023 (Saturday & Sunday)	Holiday			
Day-8, 18th Sep, 2023 (Monday)	0930-1030 hrs	Physics of Glaciers - theory	Prof. R. Shankar	The Institute of Mathematical Sciences, Chennai
	1030-1045 hrs	TEA BREAK		
	1045-1145 hrs	Regional earth system modelling framework for CORDEX-SA for climate studies over SA	Dr. Pankaj Kumar	IISER, Bhopal
	1145-1245 hrs	Climate Models, Downscaling and Projections	Prof. Sharad K. Jain	IIT, Roorkee
	1245-1345 hrs	LUNCH BREAK		
	1345-1445 hrs	Snowfall Variability Dictates Glacier Mass Balance Variability in Himalaya-Karakoram	Dr. Pankaj Kumar	IISER, Bhopal
	1445-1500 hrs	TEA BREAK		

	1500-1630 hrs	Exercise-Geodetic glacier mass balance estimation at glacier basin scale	Dr. Tariq Abdullah, Dr. Khalid, Mr. Mustafa, Mr. Ummer	University of Kashmir, Srinagar
Day-9, 19th Sep, 2023 (Tuesday)	0930-1030 hrs	Physics of Glaciers –Interactive session	Prof. R. Shankar	The Institute of Mathematical Sciences, Chennai
	1030-1045 hrs	TEA BREAK		
	1045-1145 hrs	Glacier Mass Balance Monitoring- Ground approach	Dr. D.P. Dobhal	WIHG, Dehradun
	1145-1245 hrs	Mini projects	Dr. Khalid, Dr. Tariq, Dr. Bashrat, Dr. Mudasir, Mustafa, Ummer Amin	University of Kashmir, Srinagar
	1245-1345 hrs	LUNCH BREAK		
	1345-1445 hrs	Exercise-Glaciological mass balance estimation of an individual glacier	Dr. D.P. Dobhal, Dr. Tariq, Dr, Khalid Omar, Dr. Bashrat	WIHG, University of Kashmir
	1445-1500 hrs	TEA BREAK		
	1500-1630 hrs	Exercise-Glaciological mass balance estimation of an individual glacier	Dr. D. P. Dobhal, Dr. Tariq, Dr, Khalid Omar, Dr. Bashrat	WIHG, University of Kashmir
Day-10, 20th Sep, 2023 (Wednesday)	0930-1030 hrs	Glacier Lake Assessment and Monitoring	Dr. D. P. Dobhal	WIHG, Dehradun
	1030-1045 hrs	TEA BREAK		
	1045-1145 hrs	Importance of Cryosphere observations using Advanced instrumentation in the Third Pole	Prof. Shakil Ahmad Romshoo	University of Kashmir, IUST
	1145-1245 hrs	Mini projects	Dr. Khalid, Dr. Tariq, Dr. Bashrat, Dr. Mudasir, Mustafa, Ummer Amin	University of Kashmir
	1245-1345 hrs	LUNCH BREAK		
	1345-1445 hrs	Glacier Fieldwork orientation, Safety Considerations, Logistics and Instrumentation	Prof. Shakil Ahmad Romshoo, Dr. D. P. Dobhal, Dr. Khalid	University of Kashmir, WIHG

			Omar, Dr. Tariq Abdullah, Dr. Mudasir	
	1445-1500 hrs	TEA BREAK		
	1500-1630 hrs	Free Evening/ Trekking		
Day-11 to 19, 21st to 29th Sep, 2023 (Thursday to Friday)	Departure to Ladakh for fieldwork at the Machoi Glacier site near Drass, Kargil Field training at the glacier site (please see the detailed day-wise fieldwork program as annexure to this time table)			
Day-19, 29th Sep, 2023 (Friday)	Departure from Drass, Kargil in Ladakh to KU, Srinagar			
Day-20, 30th Sep, 2023 (Saturday)	1000-1330 hrs	Final project presentation by participants (GroupWise) including tea break	Prof. Shakil Ahmad Romshoo Prof. M. Farooq Mir Dr. Reyaz A Dar Dr. Khalid Omar Dr. Tariq Abdullah	University of Kashmir
	1330-1430 hrs	LUNCH		
	1430-1630 hrs	Feedback and Valedictory		
Day-21, 1st October, 2023 (Sunday)	Departure of the School participants to respective destinations			

Lecture format: 50 min + 10 discussion