



**NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL**

Warangal -506004, Telangana State



*KARYASHALA under SERB Accelerated Vigyan Program A One Week High End Research Training Programme on*

## **Modelling Hydrological Extremes under Changing Climate**

**Dept. of Civil Engineering**

**Date: 2<sup>nd</sup>– 8<sup>th</sup> January 2023**



<b>Day</b>	<b>10:00 AM to 11:30 AM</b>	<b>11:45 AM to 01:15 PM</b>	<b>2:30 PM - 5:00 PM</b>
Day 1 (02-01-2023)	Analysis of Hydrological Extreme Events Prof. V. V. Srinivas (IISc Bangalore)	Basics of climate and climate models Dr. Litan Kumar Ray (NIT Warangal)	Introduction to R and climate data download
Day 2 (03-01-2023)	Non-stationary frequency analysis of hydrological extremes by Prof. N.V. Umamahesh (NIT Warangal)	Flood Susceptibility based Building Risk Assessment for Urban Floods under Climate Change Prof. K.S. Raju (BITS Hyderabad)	Downscaling and bias correction and extreme indices
Day 3 (04-01-2023)	Hydroclimatic extremes Prof. C.T. Dhanya (IIT Delhi)	Introduction to Hydrological Modelling Dr. Vema Vamsi Krishna (NIT Warangal)	Climate data analysis
Day 4 (05-01-2023)	Studies on droughts under climate change Prof. K.V. Jayakumar (NIT Warangal)	Uncertainty in Hydrological Modelling Prof. K. P. Sudheer (IIT Madras)	SWAT model introduction
Day 5 (06-01-2023)	Climate and Weather-Related Extremes: Challenges and Opportunities Prof. V. P. Singh (Texas A&M University)	Extreme Precipitation: A Case Study of Chennai Floods Prof. Balaji Narasimhan (IIT Madras)	SWAT model setup
Day 6 (07-01-2023)	Multi-scale approaches in forecasting extreme and their global connections Dr. Ankit Agarwal (IIT Roorkee)	Impact of climate change on water resources of a river basin- case studies Prof. K. Venkata Reddy (NIT Warangal)	Calibration and validation of SWAT
Day 7 (08-01-2023)	Hands on session	Feedback and valedictory session	

**11:30 AM to 11:45 AM – TEA BREAK**

**01:15 PM to 2:30 PM – LUNCH BREAK**