# **RCRM** 2021

# 1<sup>st</sup> International Conference on **River Corridor Research and Management**

25<sup>th</sup> to 27<sup>th</sup> February 2021,

We are pleased to announce the 1<sup>st</sup> International Conference on River Corridor Research and Management (RCRM 2021) organized by the Indian Institute of Technology Jammu in association with Indian Institute of Technology Guwahati in virtual mode. The Department of Civil Engineering welcomes researchers, scholars scientists, students and practitioners working in various areas of river

research and applications to present, interact and discuss the ongoing and future prospects in river science. We hope to achieve research awareness, knowledge dissemination and possible

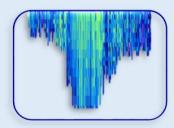
collaborations in aligned areas through RCRM 2021. This conference is funded by the "Shastri Indo-

Canadian Institute (SICI) Golden Jubilee Conference and Lecture Series Grant".

Dept. of Civil Engineering, Indian Institute of Technology Jammu, J&K, India.







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# Call for Abstracts

Major conference themes include river hydraulics, river dynamics, experimental and field hydraulics, remote sensing applications, river aquatic health, river ecology and other aligned. Interested individuals can send a short abstract of maximum 200 words by registering here

https://forms.gle/UDijQC8TAULHNE5w5

#### **Key Dates**

Last date of abstract submission	14 Feb., 2021
Intimation of abstract acceptance	17 Feb., 2021
Presentation submission	21 Feb., 2021

#### Registration

No Registration Fee. Participants are requested to register here. https://forms.gle/UDijQC8TAULHNE5w5



River Disaste



Dr. S. K. Barik



**River Modelling** 

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Dr. S. N. Kuiry IIT Madras

#### **Organized by**



# **IIT JAMMU**

#### **Organising Committee**

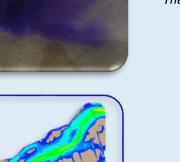
#### Patron

Prof. Manoj S Gaur, Director IIT Jammu Coordinator Dr. Chembolu Vinay IIT Jammu **Co-coordinator** Prof. Subashisa Dutta IIT Guwahati **Co-coordinator** Dr. Divyesh Varade IIT Jammu **Advisory Member** Dr. Nitin Joshi IIT Jammu **Advisory Member** Dr. Sameer K. Sarma P. IIT Jammu

#### **Conference Contact**

Dr. Chembolu Vinay Department of Civil Engineering, IIT Jammu Email: chembolu.vinay@iitjammu.ac.in Phone: +91 (191) 2741175

Dr. Divyesh Varade Department of Civil Engineering, IIT Jammu Email: divyesh.varadae@iitjammu.ac.in Phone: +91 (191) 2741171



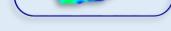


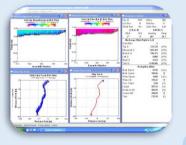


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River Aquatic He

Dr. H. Prashanth Reddy IIT Kharagpur







Dr. Basanta K. Das Central Inland Fisheries Research Institute



Chandan Ghosh National Institute of Disaster Management Remote Sensi

Dr. Amit K Dubev Space Applications Centre ISRO, Ahmedabad

#### Conference Website

https://sites.google.com/iitjammu.ac.in/r crm2021/home

#### Additional Information

- Selected abstracts will be considered for Oral or Poster presentation based on decision of organising committee
- A digital copy of abstracts of all the presenters will be made available to the participants.
- Best 20 presentations may be called for submitting full length papers to be published in Springer Nature



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Sponsored by Shastri Indo-Canadian Institute Golden Jubilee Online Conference and Lecture Series Grants

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#### Conference Schedule Day 1, 25<sup>th</sup> February 2021

Time (IST)	Invited Speaker	Title of the Talk
9:00 am to 10:00 am	Prof. Marwan Hassan University of British Columbia, Canada	Patterns of channel stability and morphology of gravel-bed streams
10: 00 am to 11:00 am	Prof Subashisa Dutta IIT Guwahati	Macro-Turbulence, Energy Expenditure and Sediment Transport in Large Braided River
11:00 am to 11:10 am	Dr. Prachi Kaul Director, Shastri Indo-Canadian Institute	Opportunities through Shastri Indo-Canadian Institute Programs

## **Conference Presentations on Modeling Studies**

**Invited Lectures** 

Time (IST)	Participant	Title of the Presentation
11: 10 am to 11:20 am	Suresh Modalavalasa	Analysis of flow at the vicinity of bridge pier in the floodplain of a sinuous
	IIT Guwahati	channel
11:20 am to 11:30 am	Ray Singh Meena	Flood inundation modelling using coupled 1d-2d HEC-RAS model in lower
	NIT Hamirpur	Kosi river basin, india with limited data
11:30 am to 11:40 am	P C Nayak	Pulichintala Dam Breach Analysis and Modelling using HEC-RAS
	NIH Kakinada	
11:40 am to 11:50 am	M. Selva Balan	Performance evaluation of artificial intelligence in flood estimation for small
	CWPRS Pune	river streams
11:50 am to 12:00 pm	SS Rawat	Modelling of Sediment Yield in Tawi River for Identification of Critical
	NIH Roorkee	Sources of Sediments
12:00 pm to 12:10 pm	Deepak Singh Bisht	River flow dynamics in changing climate scenarios – a case study of Mahanadi
	NIH Jammu	River basin of eastern India
12:10 pm to 12:20 pm	Surendar Natarajan	Flood Modeling Approach for an Inundated Ungauged River Basin Using
	NIT Trichy	Hydraulic Modeling Approach
12:20 pm to 12:30 pm	T. Thomas	Runoff Simulation in Upper Narmada basin using Soil and Water Assessment
	NIH Bhopal	Tool (SWAT)
Invited Lectures		
Time (IST)	Invited Speaker	Title of the Talk
4:00 pm to 5:00 pm	Dr. Basanta K. Das	Aqualife Vis-a-Vis Anthropocene in Rivers: A holistic management
	Director, Central Inland Fisheries Research Institute, Barrackpore	approach is need of hour



#### 5:00 pm to 5:30 pm Dr. Chembolu Vinay IIT Jammu Field Scale Data Collection for River Engineering Studies

#### **Short Presentations**

Time (IST)	Participant	Title of the Presentation
5: 30 pm to 5:35 pm	Ashwin S Aher, <i>PREC</i>	A Review on Damanganga-Vaitarna-Godavari link project
5:35 pm to 5:40 pm	Rohit Sandhu NIT Hamirpur	Floodplain analysis in Kosi river using HEC-RAS
5:40 pm to 5:45 pm	Sinchana M, Bangalore University	Generation of Intensity Duration Frequency Curve for Tunga Watershed
5:45 pm to 5:50 pm	Soumya SN, NIT Suratkal	Flood frequency studies of Sita catchment, Karnataka, India

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#### Conference Schedule Day 2, 26th February 2021

Invited Lectures	Conference Schedule Day 2, 26" February 2021	
Time (IST)	Invited Speaker	Title of the Talk
9:00 am to 10:00 am	Dr. Shawn M. Chartrand Simon Fraser University, Canada	A tale of a river and three dams
10: 00 am to 11:00 am	Prof H. Prashanth Reddy IIT Kharagpur	Hydrodynamics of Free Surface Flows in Emergent Vegetated Channels

# **Conference Presentations on Experimental Hydraulics and Ecology**

Time (IST)	Participant	Title of the Presentation
11:00 am to 11:10 am	Maisnam Bipinchandra Singh	Sequent depth ratio and energy losses in hydraulic jumps on rough near-
	NIT Manipur	prismatic channels with sediment flows
11: 10 am to 11:20 am	Abhishek K. Pandey	Bed-load transport equations in predicting the equilibrium bed morphology
	IIT Gandhinagar	at right-angled combined open channel junction
11:20 am to 11:30 am	Kalpana Devi	TKE budget in the Flow Field of a Horizontal Circular Cylinder Mounted on
	IIT Kharagpur	an Open Channel Bed
11:30 am to 11:40 am	Riddick Kakati	Three dimensional modelling of hybrid river training works
	IIT Guwahati	
11:40 am to 11:50 am	Indulekha Kavila	A study of the impact of some land use land cover changes on watershed
	Mahatma Gandhi University, Kerala	hydrology
11:50 am to 12:00 pm	R. K. Manna	Necessity of appropriate barrage downstream structure to facilitate fish
	CIFRI Barrackpore	migration: lessons learnt from Grand Anicut, Tamil Nadu, India
12:00 pm to 12:10 pm	Priyanka Rana	Impacts on reproductive biology of Golden Mahseer caused by climate and
	HNB Garhwal University	landuse change in western Himalaya.
12:10 pm to 12:20 pm	Anjana Ekka	Impact of anthropogenic modifications on river ecosystem services in India
	Delft University of Technology	
12:20 pm to 12:30 pm	Ketan Nandi, IIT Guwahati	Development of Conceptual Framework for Hydro-ecological Security
		across Himalayan River Basins

#### **Invited Lectures**

Time (IST)	Invited Speaker	Title of the Talk
4:00 pm to 5:00 pm	Prof. Chandan Ghosh National Institute of Disaster Management	Urban Flood Mitigation and Flexible Storage System using Geosynthetics
5: 00 pm to 5:30 pm	Dr. Vivek Gupta	Building Resilience to Climate Change: A water resources perspective



## **Short Presentations**

Time (IST)	Participant	Title of the Presentation
5: 30 pm to 5:35 pm	Akshatha SM, Bangalore University	Comparison of Estimated and Observed Runoff of Sub-basins of Cauvery
5:35 pm to 5:40 pm	Tufa Feyissa Negewo IIT Guwahati	Land Use/Cover and Climate Change Effects on Hydrological Watersheds
5:40 pm to 5:45 pm	Saketh Shetty, AJIET	A Study of Variation Of Agricultural Productivity Using Water Harvesting
5:45 pm to 5:50 pm	Archana Anand GITM Bhubaneswar	Monitoring and substantial protective measure of riverbank erosion processes
5:50 pm to 6:00 pm	Ritambhara K Upadhyay Panjab University	A Geospatial Approach for Mapping and Delineation of Palaeochannels

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#### Conference Schedule Day 3, 27th February 2021

#### **Invited Lectures**

Time (IST)	Invited Speaker	Title of the Talk
9:00 am to 10:00 am	Prof. S. K. Barik Director, CSIR- National Botanical Research Institute, Lucknow	Planning for a sustainable river basin management
10: 00 am to 11:00 am	Prof. Soumendra Nath Kuiry IIT Madras	Urbanization-hydrological-hydraulic modeling framework for flood simulations and management

#### **Conference Presentations on Remote Sensing Studies**

Time (IST)	Participant	Title of the Presentation
11:00 am to 11:10 am	Chandan Pradhan,	Assessment of transport effectiveness and recovery trajectory in regulated
	IIT Guwahati	Mahanadi river
11: 10 am to 11:20 am	Uma Narayan M.	Inferring time-space record of tectonic upliftment from the river profile
	IIT Guwahati	analysis: A case study of Siang River
11:20 am to 11:30 am	Akshay Kumar	Monitoring of sand quarrying and their impact on channel migration of the
	BIT Mesra, Ranchi	Damodar River, Jharkhand using geospatial technique
11:30 am to 11:40 am	Ranjit Deka	Use of landsat and sentinel-1 data for implementation of bank protection
	The Brahmaputra Board	work in the Brahmaputra river
11:40 am to 11:50 am	Gopinadh Rongali	Assessment of potentially dangerous glacial lakes risk mapping in satluj
	Delhi Technological University	river basin using remote sensing and GIS of Himachal pradesh- india
11:50 am to 12:00 pm	Prashanth Thallam	Two-Dimensional Dam Breach Analysis Using HEC-RAS for Tungabhadra
	JNTU Kakinada	Dam
12:00 pm to 12:10 pm	Jayatu K Bhuyan	Estimating Critical Mixing Depth condition in Eutrophicated Water Bodies
	Biozatra Science & Tech. Pvt. Ltd.,	to Prevent Harmful Cyano-Bacterial Blooms
5:30 pm to 5:40 pm	C J Jagadeesha	Multi Chaneel SAR Interferometry for Mighty Brahmaputra River Systems
	Former ISRO Scientist	Engineering

#### **Invited Lectures**

Time (IST)	Invited Speaker	Title of the Talk
4:00 pm to 5:00 pm	Dr. Amit Kumar Dubey Space Applications Centre, ISRO Ahmedabad	Satellite Remote Sensing for River Corridor Studies
5: 00 pm to 5:30 pm	Shri. Akkimi Anjaneyulu	Availability of Digital Elevation Models for River Floodplain Modeling



#### **Short Presentations**

Time (IST)	Participant	Title of the Presentation
5:40 pm to 5:45 pm	Pallavi M, REVA University	Morphometric Analysis and Water Quality using RS and GIS
5:45 pm to 5:50 pm	Shannon Meryl Pinto, NIT Suratkal	Morphometric Analysis for Geo-Hydrological Studies using RS and GIS –
5:50 pm to 5:55 pm	Lakshmi, AIT Bangalore	Derivation of unit hydrograph for cumulative watershed area using DEM
5:55 pm to 6:00 pm	Dev Anand Thakur, NIT Suratkal	Flood inundation mapping using HECRAS 2D model: A Review