

Ministry of Science &  
Technology,  
Ministry of Earth Sciences,  
Govt. of India



Presents



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iCEN - 56

**“Climate Change  
through the  
lens of modelling,  
artificial  
intelligence and  
machine  
learning”**

21<sup>st</sup> July 2022  
10:00 am – 12:00pm

BROCHURE

# I-CONNECT

## ABOUT

- A series of iconic 75 Industry connect events intended to showcase the achievements in various S & T areas.
- The purpose is to forge partnerships between government and industries of focus areas and to draw upon the rich expertise and competence of leaders of both sectors who have significantly contributed to the economic growth of the Nation.
- Each event includes a variety of programs such as mega-industry conferences, and fostering of businesses technical exhibitions, B2B meetings, round table discussions, etc. which would enable the promotion .

## OBJECTIVES

- Providing a platform for interaction amongst important groups of technology experts, government leaders, academic scholars, industry captains, and start-ups.
- Reaching out to MSMEs and Startups in a consolidated manner with a focus on funding, technology development, an technology transfer.
- Preparation of white papers for thematic areas for collaborative research and technology development.
- Identification and establishment of Networks (Govt scheme, R&D setup, Industry, MSMEs, Startup, Academia) around focus areas.

## “Climate Change through the lens of modelling, artificial intelligence and machine learning”

### ABOUT

The event focuses on understanding climate change through the lens of climate modelling, artificial intelligence and machine learning. Improving the representation of key physical processes and phenomena in climate models would be discussed.

### OBJECTIVES

- Climate change modelling – Earth System Models (ESM)
- Improve the representation of key physical processes in ESM
- Brainstorm techniques to supplement dynamical modelling efforts
- Computational facilities required for AI/ML in climate modelling

### TOPICS TO BE COVERED

- Key scientific challenges in climate change modelling
- AI/ML & deep learning applications for ESMs
- Climate Downscaling
- GPU computing
- Crop mapping using AI and remote sensing for eco-agriculture and sustainability (CARES)

## SPEAKER PANEL



Dr. Ayantika Dey  
Choudhury  
Scientist E  
IITM Pune

Monsoon dynamics, climate change



Dr. Manmeet Singh  
Scientist C  
IITM Pune

Climate modelling, AI/ML approaches  
for weather and climate science,  
aerosols



Dr. Ankit Agarwal  
Assistant Professor  
IIT Roorkee

Extreme Events, Hydroclimatology,  
Complex Network



Dr. Manish Modani  
Principal Solution  
Architect  
NVIDIA

GPU computing, AI/ML, HPC



Dr. Adway Mitra  
Assistant Professor  
IIT Kharagpur

Downscaling using AI/ML methods

## DISCUSSION PANEL



Dr. Swapna Panickal  
Scientist E  
IITM Pune



Dr. Saktivel Samy  
Scientist F  
NCPOR, Goa



Prof. Sridhar  
Balasubramanian  
Associate Professor  
IIT Bombay



Dr. Praveen  
Pankajakshan  
VP Data Science &  
AI  
CropIn Technology  
Solutions

## + 5 SPEAKERS

- Dr. Ayantika Dey Choudhury
- Dr. Manmeet Singh
- Dr. Ankit Agarwal
- Dr. Manish Modani
- Dr. Adway Mitra

# EVENT SCHEDULE

Time: 10 am – 12 pm

SESSION	SPEAKER	TOPIC	TIME
Inaugural	Dr. R. Krishnan	Welcome Address	10:00-10:10
Presentation	Dr. Ayantika Dey Choudhury	Process-based improvements in climate models	10:10-10:20
	Dr. Manmeet Singh	Deep learning augmented numerical weather prediction	10:20-10:30
	Dr. Ankit Agarwal	Network techniques for hydrological applications	10:30-10:40
	Dr. Manish Modani	Use of GPU computing for AI/ML applications	10:40-10:50
	Dr. Adway Mitra	Deep learning based regional downscaling	10:50-11:00
Panelists	Dr. Swapna Panickal	Data science and statistics in meteorology, atmospheric science, water resources, oceanography and climate change.	11:00-11:50
	Dr. Saktivel Sami		
	Prof. Sridhar Balasubramanian		
	Dr. Praveen Pankajakshan		
	+ 5 speakers		
Closing	Convener	Closing remarks and vote of thanks	11:50-12:00

## CONTACT DETAILS

### EVENT COORDINATION

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## SCAN QR FOR REGISTRATION



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## CSIR Fourth Paradigm Institute

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