



विज्ञान एवं प्रौद्योगिकी विभाग  
DEPARTMENT OF  
**SCIENCE & TECHNOLOGY**



## **4<sup>th</sup> National Workshop on Technology Innovation in Cyber-Physical Systems (TIPS 4.0)**

Under

**National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**

Organized by

**Department of Science & Technology, Government of India**

Hosted by

**TIH Foundation for IoT and IoE, IIT Bombay**

**13<sup>th</sup>-14<sup>th</sup> May 2024**

**Venue: Victor Menezes Convention Center (VMCC)**

**Indian Institute of Technology, Bombay**

## **Executive Summary**

The NM-ICPS, a National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS) being implemented by the Department of Science & Technology (DST), Government of India, has established 25 Technology Innovation Hubs (TIHs) across the nation, housed within premier academic institutes. These TIHs are dedicated to advancing technology development and translation, fostering human resource and skill development, promoting entrepreneurship and start-ups, and facilitating international collaborative research endeavours in cyber physical systems (CPS).

The National Workshop on Technology Innovation in Cyber Physical Systems (TIPS) conducted by the NM- ICPS, DST is a bi-annual workshop wherein each of the 25 TIHs demonstrate the progress and achievements made. It is a platform for all the stakeholders including Government, Startups, Investors, Academia, and Industry to interact, exchange ideas and witness the cutting-edge technology development in CPS domain.

## **Investor Pitch**

In view of the national mission to promote innovation and entrepreneurship in the CPS domain, the TIPS 4.0 workshop will also feature a 'Investor Pitch' event wherein a bunch of DeepTech startups working in CPS domain will be pitching to esteemed VCs and Angel Investors for funding. The Startup Pitches will run in parallel across 3 tracks based on the funding amount being raised viz.,

1. Micro: 50 Lakhs – 1 Crore
2. Mini: 1 Crore – 2 Crore
3. Mega: Above 2 Crore

The DeepTech startups pitching at the TIPS 4.0 will be from the following 5 thematic areas of Agriculture, Healthcare, Defence, Environment, Infrastructure.

In addition to Startup Pitches, the TIPS 4.0 workshop will also feature a Tech Expo wherein the startups will exhibit and demonstrate their cutting-edge technology to stakeholders from the Government and Investor community.

## TIPS 4.0 Agenda

**Day 1: Monday, 13<sup>th</sup> May, 2024**

<b>Day 1: Monday, 13<sup>th</sup> May, 2024</b>		
09:00 - 10:00	<b>Registration - Foyer Area</b>	
<b>10:00 - 11:00</b>	<b>Inaugural Session, VMCC Auditorium</b>	
10:00 - 10:05	Lighting of Lamp	
10:05 - 10:10	Welcome by <b>Prof. Shireesh Kedare</b> , Director, IIT Bombay	
10:10 - 10:15	Remarks by <b>Prof. V Ramgopal Rao</b> , Vice Chancellor - BITS Pilani (Chairman,SAC, NM-ICPS)	
10:15 - 10:20	Remarks by <b>Dr. Kris Gopalakrishnan</b> , Chairman, Axilor Ventures (Chairman, MGB, NM-ICPS)	
10:20 - 10:25	Release of Quarterly Bulletin & Compendium of NM-ICPS by the Chief Guest, <b>Prof. Abhay Karandikar</b> , Secretary, DST	
10:25 - 10:30	Address by Chief Guest <b>Prof. Abhay Karandikar, Secretary, DST</b>	
10:30 - 10:40	Felicitation/Presentation of Mementos to Dignitaries	
10:40 - 10:45	Vote of Thanks by <b>Dr. Ekta Kapoor</b> , Mission Director, NM-ICPS and Head, FFT Division, DST	
10:45 - 10:50	Group Photograph	
10:50 - 11:00	<b>Inauguration of the Exhibition</b> by <b>Dr. V. K. Saraswat</b> , Hon'ble Member (S&T), NITI Aayog, Govt of India	
11:00 - 11:30	<b>Vist to Exhibition</b>	
11:30 - 12:00	<b>Tea Break</b>	
<b>12:00 - 13:00</b>	<b>Technical Session, VMCC Auditorium</b>	
12:00 - 12:20	<b>NM-ICPS: Towards achieving Global leadership in Cyber-Physical Systems</b> by <b>Dr. Ekta Kapoor</b> , Mission Director, NM-ICPS and Head, FFT Division, DST	
12:20 - 12:40	<b>Way Forward and Vision for NM-ICPS</b> by <b>Dr. Kris Gopalakrishnan</b> , Chairman, Axilor Ventures (Chairman, MGB, NM-ICPS)	
12:40 - 13:00	<b>Interventions for improving the performance of the TIHs</b> by <b>Prof. V Ramgopal Rao</b> , Vice Chancellor - BITS Pilani (Chairman,SAC, NM-ICPS)	
13:00 - 14:00	<b>Lunch</b>	
<b>14:00 - 16:30</b>	<b>Theme-wise presentations (Closed Door) VMCC Auditorium</b>	<b>Investors Pitch Presentations by the Startups Seminar Room</b>
<b>14:00 - 15:30</b>	<b>Theme: Agriculture</b>	
14:00 - 14:10	TIH FOUNDATION FOR IOT AND IOE, Indian Institute of Technology, Bombay	Investors Pitch -1: Micro ( Seminar Room 4 Ground Floor )
14:10 - 14:20	IIT ROPAR-TECHNOLOGY AND INNOVATION FOUNDATION, Indian Institute of Technology, Ropar	Investors Pitch - 2: Mega ( Seminar Room 2 Ground Floor )
14:20 - 14:30	IIT PATNA VISHLESAN I-HUB FOUNDATION, Indian Institute of Technology, Patna	Investors Pitch - 3: Mega ( Seminar Room 3 Ground Floor )
14:30 - 14:40	AI4ICPS I-Hub Foundation (TIH) at Indian Institute of Technology, Kharagpur	

14:40 - 14:50	IIT Bhilai Innovation and Technology Foundation, Indian Institute of Technology, Bhilai		
14:50 - 15:00	IDEAS- Institute of Data Engineering, Analytics and Science Foundation, Indian Statistical Institute, Kolkata		
15:00 - 15:30	Q&A session		
<b>15:30 - 16:30</b>	<b>Theme: Defence</b>		
15:30 - 15:40	IHUB NTIHAC FOUNDATION, Indian Institute of Technology, Kanpur		
15:40 - 15:50	TIH Divyasampark I Hub Device Material and Technology, Indian Institute of Technology, Roorkee		
16:00 - 16:10	I-HUB QUANTUM TECHNOLOGY FOUNDATION, Indian Institute of Science Education and Research, Pune		
16:10 - 16:30	Q&A session		
16:30 - 17:00	Session on PFMS by Mr. Francis, CCA office, DST		
17:00 - 17:30	Tea Break		
17:30 - 19:00	Cultural Program - Convocation Hall		
19:00 Onwards	Dinner		

Day 2: Tuesday, 14 <sup>th</sup> May, 2024		
09:30 - 10:00	Talk on “Establishing effective start-up ecosystem in Deep-tech area” by Shri Shaji Varghese, CEO, Society for Innovation & Entrepreneurship (SINE) - IIT Bombay <b>Seminar Room 4</b>	Technical Session on Open Radio Access Network (ORAN) Technologies by Prof. Kiran Kuchi, IIT Hyderabad <b>Seminar Room 5</b>
10:00 - 13:00	<b>Theme-wise presentations (Closed Door)</b> <b>VMCC Auditorium</b>	<b>Investors Pitch Presentations by the Startups</b> <b>Seminar Room</b>
10:00 - 11:25	<b>Theme: Infrastructure</b>	Investors Pitch -1: Micro ( Seminar Room 4 Ground Floor )
10:00 - 10:10	NMICPS TECHNOLOGY INNOVATION HUB ON AUTONOMOUS NAVIGATION FOUNDATION (TiHAN), Indian Institute of Technology, Hyderabad	Investors Pitch - 2: Mini ( Seminar Room 2 Ground Floor )
10:10 - 10:20	I-HUB FOR ROBOTICS AND AUTONOMOUS SYSTEMS INNOVATION FOUNDATION Society for Innovation and Development, Innovation Centre Building, IISc Bangalore	Investors Pitch - 3: Mega ( Seminar Room 3 Ground Floor )

10:20 - 10:30	TECHNOLOGY INNOVATION IN EXPLORATION AND MINING FOUNDATION, Indian Institute of Technology (ISM), Dhanbad
10:30 - 10:40	IIIT-H DATA I-HUB Foundation, International Institute of Information Technology, Hyderabad
10:40 - 10:50	IIITB COMET FOUNDATION, International Institute of Information Technology, Bengaluru
10:50 - 11:00	IIT MANDI IHUB AND HCI FOUNDATION, Indian Institute of Technology, Mandi
11:00 - 11:10	IIT TirupatiNavavishkar I-Hub Foundation, Indian Institute of Technology, Tirupati
11:10 - 11:30	Q&A session
11:30 - 11:45	<b>Tea Break</b>
11:45 - 13:00	<b>Theme: Healthcare</b>
11:45 - 11:55	IITI DRISHTI CPS FOUNDATION, Indian Institute of Technology, Indore
11:55 - 12:05	IHUB DRISHTI FOUNDATION, Indian Institute of Technology, Jodhpur
12:05 - 12:15	BITS BioCyTiH Foundation, BITS Pilani
12:15 - 12:25	IITM Pravartak Technologies Foundation, Indian Institute of Technology, Madras
12:25 - 12:35	I-Hub for Cobotics Foundation, Indian Institute of Technology, Delhi
12:35 - 12:45	IHUB Anubhuti-IIITD Foundation, Indraprastha Institute of Information Technology, Delhi
12:45 - 13:00	Q&A session
13:00 - 14:00	<b>Lunch</b>
14:00 - 14:50	<b>Theme: Environment (Closed Door)</b> <b>VMCC Auditorium</b>
14:00 - 14:10	IIT Guwahati Technology Innovation and Development Foundation, Indian Institute of Technology, Guwahati
14:10 - 14:20	I-DAPT-Hub Foundation, Indian Institute of Technology BHU, Varanasi
14:20 - 14:30	IIT PALAKKAD TECHNOLOGY IHUB FOUNDATION, Indian Institute of Technology, Palakkad
14:30 - 14:50	Q&A session
15:00 - 15:30	<b>Concluding Session: Way Forward</b> <b>(Moderated by Dr. Ekta Kapoor, Head, FFT Division, DST)</b> <b>VMCC Auditorium</b>
15:00 - 15:05	Brief Remarks by <b>Prof. Abhay Karandikar</b> , Secretary, DST
15:10 - 15:15	Brief Remarks by <b>Dr. Kris Gopalakrishnan</b> , Chairman, Axilor Ventures (Chairman, MGB, NM-ICPS)

15:15 - 15:20	Brief Remarks by <b>Prof. V Ramgopal Rao</b> , Vice Chancellor - BITS Pilani (Chairman, SAC, NM-ICPS)
15:20 - 15:25	Vote of Thanks by <b>Tanushri Sharma</b> , Scientist-C, FFT Division, DST
<b>National Anthem</b>	

**Note:** *Brief Presentations by the Technology Innovation Hubs (TIHs) focusing on the theme area. Each TIH is assigned 10 minutes for their presentation.*