

**DATES- MARCH 4-5, 2022**



AatmaNirbhar Bharat

# **ARTIFICIAL INTELLIGENCE**

**A STRATEGIC SYNERGY BETWEEN IT & DEFENCE , ITD 2022**

**A Hybrid Conference by**

CSI- Bangalore Chapter & SIG-Formal Methods, Computer Society of India.

**Venue:** To be announced (Limited delegates)



**Knowledge Partner:**

Centre for Development of Advanced Computing, India

# About Conference

CSI-BC has been pioneering to bring the various DRDO labs and the defence services together over the years by organizing the Conference on Information Technology in Defence (ITD) annually. The last one was held in December 2020 on the theme IT in Defense Manufacturing. In this edition, the theme chosen is Atmanirbhar Bharat - Artificial Intelligence, A Strategic Synergy between IT and Defense.

Globally, the Defence technology is going thru major innovations to face challenges in national security. With advent of Atmanirbhar Bharat promoted by GoI, it is imperative for every defense users and suppliers of India to revisit their offerings. Innovation, Collaboration, Partnership, Betterment of Defense performance using AI, IT, IP Protection, Methods, Standards and Rights are critical requirements to ensure meeting military goals. The program is conceived with inputs from very senior advisors from defence forces and DRDO labs.

Artificial Intelligence (AI) has started to play an increasing role in all aspects of Information Technology (IT), defence equipments and systems and in Information Communications Technology (ICT). In defence AI is playing increasing role in all aspects of Defence starting from Development of Defence products , operational and deployment of Defence weapons, strategies in the battlefield , maintenance , training and life time product support .. The defence weapons could be of an offensive type or defensive type, they could be ground based , vehicle based , air based, sea based or space based. They could be manned or unmanned . AI plays critical role on all modern defence equipments and making users more effective and efficient AI is also continuously evolving and becoming more intelligent, reliable and dependable.

Computer Society of India wants the field of Formal Methods to be part of this event which also uses AI/ML and thus have a wider audience and more people to benefit from the application of these methods to all spheres of life. There is a need to use effective, correct and reliable approaches to design, develop and qualify complex, high assurance system software with the rigid schedules and budget. For this we need advanced tools, techniques and methods. Industry standards like RTCA DO-178C (Civil Aerospace), ISO 26262 (Automotive), IEC 61513(Nuclear), EN50126 (Railways) have recommended the usage of formal-method-based approach to be used in the various phases of engineering process to achieve the required levels of safety and security.

Today there are proven techniques and tools that can be used in specification, design and verification & validation phases to assure correct requirement-capture, implementation, software functionality and security. This helps in developing high assurance software for applications such as cyber-physical systems, net-centric warfare systems, autonomous robots and Next Generation Air Transportation.

This conference is to bring all the different people on a single platform to discuss the status of its use in Defence systems, its availability, its future and explore new avenues. This will hopefully accelerate the use of artificial intelligence by showing making the advantages of AI and bring the implementers (IT) and the user community (Defence) closer to help the defence sector by several orders of magnitude.

## Topics

### TRACK- 1

Digital Technologies in Defense Missions

**Session1:** AI Integrated in Weapon Systems (Defensive & Offensive )

**Session2:** Significance of AI in Defence Platforms (Aircraft, UAVs Naval Ships, Submarine, Tanks etc.)

### TRACK- 2

Digital Technologies in Communications systems

**Session 1:** AI in Electronics (networks, radars, 5G, sensors, IR)

**Session 2:** Formal methods and Application of formal methods for safety critical applications

**Session 3:** Integration AI, ML & IOT for Proactive Support Systems

### TRACK-3

AI in Digital Technologies, Defence Organisation Functioning

**Session 1:** AI in support Systems, Army bases, Airforce bases, Naval Bases.

**Session 2:** Integration of AI in Defence Logistics and maintenance

**Session 3:** AI Supported Defence Learning and Development Systems

### PANEL DISCUSSION

**Theme:** Defense Digitalization & AI for enhanced efficiency / Use Cases/ self healing / adaptive



# Program Sessions

## CHIEF GUEST

**Dr. Sateesh Reddy, Secretary, Department of Defence R&D, and Chairman, DRDO**

## GUEST OF HONOUR

**Dr. (Mrs.) K Rajalakshmi Menon, Outstanding Scientist, Program Director (AEW&C MKII) and Director of CABS, DRDO**

## Speakers

Dr. Subrata Rakshit, Director, CAIR, DRDO  
Dr. Sunny Manchanda, Director, Young Scientist Lab, DRDO  
Rear Adml. Guninder Singh Jawanda, DG, WESEE  
Dr. Prahlada Ramarao, Padma Shri, Pro-Chancellor S-VYASA  
Maj Gen Ravi Chaudhary, VSM (Retd.), NTRO  
Dr S. E. Talole, Scientist 'G' and Group Director, Systems & Control Group at the R&DE(E), Pune  
Dr. S. Karunanidhi, Associate Director, OS, RCI, DRDO, Hyderabad  
Dr. Manju Nanda, Chief Scientist and Asst. Director ALD, CSIR-NAL  
Mr. Ramshankar CS, CEO - Maxbyte Technologies, Coimbatore  
Dr. Bharat Jayaraman, Emeritus Prof. University of Buffalo (SUNY)  
Dr. Ramakrishnan Raman, Principal Systems Engineer, Honeywell  
Dr. Vinay Jammu, VP Digital Technologies, GE  
Mr. Nilesh Parulekar, GM & Head Defence Electronics and Sensors, L&T  
Mr. Sagar Verma, Researcher at TCS  
Mr. Sundar Prasad Jayaraman, Sr. Tech. Architect, Accenture  
Dr. Sumana Ghosh, Prof. ISI, Kolkata  
Mr. Raghavendra Bhat, Ansys  
Col Aman Bains, Army Design Bureau  
Speaker from Altair Engineering Pvt Ltd

### Topic:

**CREATING A PARADIGM SHIFT TOWARDS THE USE OF ARTIFICIAL INTELLIGENCE IN ALL FACETS IN THE DEFENCE SECTOR**

## Members of the Panel

Mr. Ramshankar CS, CEO, Maxbyte Technologies  
Prof. B Ravindran, Department of Computer Science and Engineering, IIT Madras  
Mrs. Padmavathi, Sc "H", ADA Outstanding Scientist, PD (LCA AF MKI) and Assoc. TD (Avionics & Weapon System)  
Dr. Sudhir Kamath, Former DG(Micro Electronics), DRDO  
Dr. Prahlada Ramarao, Pro-Chancellor S-VYASA, former VC(DIAT)  
Dr. Venkatesh Sc "G", Head, Spacecraft Health Monitoring and Software Division, ISAC, ISRO  
Rep from Altair

### The Program will be most relevant to

- ✓ Scientists and Senior Managers from Defence Labs and Establishments
- ✓ Defence Industry - Public and private
- ✓ Professionals from IT Industry
- ✓ Academicians
- ✓ Students and researchers
- ✓ Government Officials
- ✓ Armed Forces & Intelligence

There will be a special B2B physical meeting between Invited Guests from DRDO, Armed Forces and Sponsors on day one to have discussions with the invitees. The venue and time will be announced shortly.

Those delegates who are interested to attend this meet should register separately. Due to pandemic, the seats are limited and CSI will take the final call on the numbers.

**Timings** 9.30 am to 4.30 pm  
(on both the days)

### Mode of Conference

Hybrid And Online In Google Meet Or Webex  
Admission Through Registration and  
**"First Come First Served"**



## About CSI

Computer Society of India (CSI) is the largest IT professional society in India established in 1965 with 72 chapters across the country and with nearly a hundred thousand members. The vision of CSI is to facilitate research, knowledge sharing and profession enrichment among IT professionals across industry segments. Various Special Interest Groups such as Information Security, Data Analytics, Artificial Intelligence, e-Governance evangelize the use of technologies. CSI has been organising various seminars, conferences, and technical talks periodically. IT for Defence (ITD) is one such flagship event of the CSI.

CSI BC and SIG for Formal Methods have been conducting ITD every other year and this is the 13th in the series.

# Conference Registration Fee

<b>Individual</b>	<b>Rs. 750</b>
<b>Students</b>	<b>Rs. 300</b>
<b>Bulk Registrations (10 No's)</b>	<b>Rs. 4,000</b>

**+ GST @ 18%**

*\*Registration fee includes Certificate.*

Please note that all delegates will be able to attend the exhibition throughout the duration of the conference

## Sponsorship Package & Benefits

- Prime time speaker slot for Platinum sponsor
- Display of Sponsor's names on the sides of the Projections Screens
- Presentation Time for the Sponsors to present a technical talk on the theme of the session
- Branding of the sponsors names in the brochure, conference hall and landing page
- Virtual Exhibition Stalls
- Various Other Virtual Forums will be available on the platform
- We will share the delegate database with sponsors
- Emcee will announce the sponsors of the event at least 4 times during the program
- Landing Page will play Platinum Sponsor's video on regular basis

Type	Amount (Rs)	Speaker Slot	E- Stall	Sharing Delegate List	Mailer Campaign	Inaugural Session	Panel Discussion	Lunch & HIGH TEA	Branding- Brochures
<b>Platinum</b>	5 Lakhs	Yes (30min)	Yes	Yes	Yes	YES, PHYSICAL presence with Speaker slot	YES, PHYSICAL presence as one of the panelists	YES	Yes
<b>Diamond</b>	3 Lakhs	Yes (20min)	Yes	Yes	Yes	YES, PHYSICAL Presence	YES, PHYSICAL presence	YES	Yes
<b>Gold</b>	2 Lakhs	Yes (20min)	Yes	Yes	No	YES, PHYSICAL Presence	VIRTUAL	YES	Yes
<b>Silver</b>	1 Lakh	Yes	Yes	Yes	No	VIRTUAL	VIRTUAL	YES	

\* GST @ 18% Excluded

\* Benefits also include a Souvenir and inclusion in Website.  
For more details on Sponsorship package contact CSI-BC office.

Following are some among the many luminaries who have addressed the August gathering in the past

**Dr. V.S. Arunachalam**, Former SA to RM  
**Dr. S. Christopher**, Former Chairman DRDO  
**Dr. V.K Saraswat**, Former SA to RM  
**Dr. Prahlada Ramarao**, Former VC, DIAT, Pune & Distinguished Scientist  
**Dr. C.R Chakravathy**, Former Director DRDO  
**Dr. K D Nayak**, DS & CC R&D, New Delhi  
**Dr. Ajit T Kalghatki**, Former BEL R&D Director  
**Dr. Tamilmani**, Former DS & DG (Aero)  
**Dr. S.S. Sundaram**, Former Distinguished Scientist, CC R&D  
**Dr. S. Vardarajan**, Director, LRDE, Bangalore  
**Dr. G. Athithan**, OS, Former, Associate Director, CAIR

**Dr. Tessy Thomas**, DG(AERO)  
**Dr. G. Athithan**, OS, Chair, CAIR, DRDO  
**Lt. Gen Davinder Kumar**, PVSM, VSM Bar, ADC (Retd.), Distinguished Fellow, VIF, Former SOin-C (Cyber Security)  
**Dr. E S L Narasimhan**, Former Governor of Telangana.  
**Dr. R. Sreehari Rao**, Outstanding Scientist, Chief Controller R&D (Electronics & Computer Sciences)  
**Mr. V.S. Mahalingam**, Director, CAIR, DRDO  
**Air Marshal S.B. Deo**, PVSM, AVSM, VM, VSM, ADC

## PATRONS

Dr. G. Satheesh Reddy, Secretary, Department of Defence R&D and Chairman, DRDO  
Dr. K. Sivan, Chairman ISRO, Secretary DOS  
Dr. EV Ramana Reddy IAS, Additional Chief Secretary, Dept of ITBT&ST, Govt of Karnataka

## ADVISORY COMMITTEE

Dr. Tessy Thomas, DG(Aero), DRDO, Bangalore  
Dr. Girish S Deodhare Distinguished Scientist, Director General PGD(CA), Director - ADA  
Dr (Ms) K Rajalakshmi Menon, Outstanding Scientist & Director CABS, DRDO  
Dr. Prahlada Ramarao, Padma Shri 2015, Pro Chancellor S-VYASA, former Distinguished Scientist DRDO and CC(R&D), Former VC, DIAT, Pune  
Dr. K Tamilmani, Former DG(Aero), DRDO, Bangalore  
Shri. Jitendra J Jadhav, Director, CSIR-NAL, Bangalore  
Dr. G K Patra, Chief Scientist, CSIR-4PI, Bangalore  
Dr. Gautam Mahapatra, Director, IT, RCI, & President, CSI  
Dr. Swarnalatha R Rao, Past Chairperson, CSI-BC, Past Execom Member of CSI and Fellow of CSI  
Mr. Raghavendra H. Rao, Sr. Director, Oracle Financial Services  
Dr. Manju Nanda, Sr. Scientist, CSIR-NAL

## PROGRAM COMMITTEE

Dr. Shrishail K. Angadi	CSI BC- Chairperson
Dr. R K Ramanathan	Event Chair
Shri.T. Sabapathy	Program Chair
Mrs. Bhanumathi K.S.	Event Co-chair and Convenor, SIG-FM, CSI-INDIA
Shri Vishwas Bopanna	Treasurer CSI BC & Finance chair
Dr. Pradeep V Desai	Sponsorship and Delegation Chair

## Registration fees



Use link for online payments

**Bank account name : CSI Bangalore Chapter**

S.B. A/c No : 33762189110,

Payable at State Bank of India,

Address : B1, Cross Road, MIDC, Andheri(E) Mumbai - 400 093.

IFSC Code / NEFT / RTGS Code : SBIN0007074,

MICR : 400002057, IFSC :SBIN0003298, SWIFT Code : SBININBB363,

Phone. No : 022-28362419

**Please fill other details of check, online registration link:**

<https://itd2022.oi-apps.live/>

# Contact

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ITD-2020 completed event highlights.



Address of the Chief Guest  
Tessy Thomas



Ongoing Conference

