

### About the FDP

The Faculty Development Program on “Next Gen Engineering: Exploring Intelligent & Autonomous Systems” aims to provide a comprehensive understanding of modern intelligent systems, autonomous platforms, and interdisciplinary applications shaping the future of engineering.

This FDP brings together educators, researchers, and industry experts to explore how Artificial Intelligence (AI), Machine Learning (ML), Robotics, and Embedded Systems are revolutionizing the technological landscape. It emphasizes hands-on learning, practical demonstrations, and discussions on research and industrial trends that define next-generation engineering solutions. Through interactive sessions, the program promotes collaboration between academia and industry to address emerging challenges.

### Key Topics:

- Neuromorphic in-memory processing
- Artificial Intelligence & Machine Learning for Engineering Applications
- Generative AI with Stable Diffusion for Autonomous Systems
- Fuzzy Inference Model for Autonomous, Cyber Risk Evaluation
- Intelligent Spectrum Utilization in 5G and beyond 5G using Cognitive Radio
- Artificial Intelligence Based Biomedical signal and image analysis for health care applications
- Convolutional Neural network (CNN)
- Vision Based Intelligent Systems
- AI/ML for IoT
- MATLAB & Simulink for Robotics System Design and Simulation

### CHIEF PATRONS

**Er. C. S. Varghese**  
President -Toc H Public School Society  
**Mr.Kurian Thomas**  
Manager -Toc H Public School Society

### PATRONS

**Mr. Madhu Cherian**  
Secretary -Toc H Public School Society  
**Mr. N. J. Johnson**  
Treasurer -Toc H Public School Society  
**Prof. (Dr.) Preethi Thekkath**  
Principal, TIST  
**Prof. (Dr.). Deepa Elizabeth George**  
Vice-Principal, HOD  
Department of Electronics, TIST  
**Dr.Georgina Binoy Joseph**  
Dean – UG, TIST

### COORDINATORS

**Prof. (Dr.) S. .Perumal Sankar**  
Professor, ECE Department, TIST  
**Mr.Girish P**  
Associate Professor  
Department of Robotics and Automation, TIST

### CO-COORDINATORS

**Ms. Deepa Mary Varghese**  
Assistant Professor, ECE Department, TIST  
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Assistant Professor, ECE Department, TIST.  
**Mr. Renjith PK**  
Assistant Professor, ECE Department, TIST  
**Mr. Mahesh C**  
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### CONTACT DETAILS

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# SIX DAYS Faculty Development Program (FDP) on Next-Gen Engineering: Exploring Intelligent & Autonomous Systems (Hybrid mode) Date: 17<sup>th</sup> – 22<sup>nd</sup> November 2025



Jointly organized by

Department of Electronics and Communication  
Engineering  
and  
Department of Robotics and Automation

Toc H Institute of Science and Technology  
Arakkunnam, Ernakulam,  
Kerala India – 682313

### About the Institute:

The **Toc H Institute of Science and Technology (TIST)**, Arakkunnam, Ernakulam, is under the Toc H Public School Society, governed by luminaries from the field of academics who have national and international recognition. TIST is a premier institution committed to excellence in technical education and research. The institute fosters innovation and holistic development, empowering students and faculty to meet the challenges of the evolving technological world. TIST develops ambitious engineers through innovative engineering education that connects science, technology, enterprise, and society. TIST offers nine undergraduate programs, three postgraduate programs, including an MBA, and is accredited by the NAAC (National Assessment and Accreditation Council). This institute is ISO 9001:2015 certified and NBA (National Board of Accreditation) accredited for five undergraduate programs. It is approved by AICTE and affiliated to APJ Abdul Kalam Technological University, Kerala, India.

### About the Department:

The Department of Electronics runs two B.Tech. Programs- B.Tech. in Electronics and Communication Engineering and B.Tech. in Robotics and Automation. The department is dedicated to advancing education and research in cutting-edge areas such as embedded systems, communication, robotics & automation, and intelligent technologies — bridging academia and industry for a smarter future.

### Who can participate?

Faculty members of AICTE-approved Institutions, Universities, Research Scholars, participants from Government, Industry (Bureaucrats / Technicians/ Industry experts, etc.), and professionals.

### Certificates:

- A test shall be conducted (online) by the Coordinator on the last day of the program.
- Certificates will be issued only to participants who are registered, have a minimum of 80% attendance, and score at least 70% marks in the test.
- All participants must submit their feedback on the FDP program online in the prescribed format.

### Registration details:

No Charge for Registration, Course and Certification

**Last Date for Registration:** 13<sup>th</sup> November 2025

Use the following QR code to register.



Or use the following link to register

<https://docs.google.com/forms/d/e/1FAIpQLSc79ZuoLLycThPSIFg5ep0ii5tMdW0JtvYibAHpk2n3e-ibQ/viewform?usp=header>

### Resource Persons



**Dr. Alex James**  
Dean External Linkages and Projects,  
Professor - School of Electronic Systems  
and Automation, Digital University-Kerala



**Dr. M Senthil Kumar**  
Assistant Professor  
Department of Electrical Engineering  
National Institute of Technology, Patna



**Dr Anil Raj J**  
Data Scientist, Dept of Data & AI  
India Software Labs -IBM -India



**Dr. Santhos Kumar A.**  
Assistant Professor , Department of ECE  
Indian Institute of Information  
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**Dr. Chris Prema S**  
Associ. Professor, Department of Avionics  
Indian Institute of Space Science and  
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**Dr. Chandan Kumar Jha**  
Assistant Professor,  
Department of ECE  
Indian Institute of Information Technology  
Bhagalpur



**Dr Shailesh Sivan**  
Principal AI Architect,  
Laennac AI India Pvt Ltd  
Assistant Professor, CUSAT(on leave)



**Dr. Balasubramaniam**  
Chair, Research & IPR  
Assistant Professor  
School of Computer Science and  
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**Dr. Lloyds Raja**  
Assistant Professor  
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**Dr. Riyz A Rahiman,**  
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