The Institution of Engineers(India)

A Century of Service to the Nation

Two Day All India Workshop
On

AgriShield: "Harnessing IoT, Machine Learning, and AI for Smart Crop Protection and Climate Resilience"

Date:02.09.2025 & 03.09.2025
Place: University College of Engineering, BIT Campus, Tiruchirappalli Chapter

Organisedby

The Institution of Engineers (India)

Tiruchirappalli Local Centre

Under the Aegis of

Agriculture Engineering

In Association with

Department of Civil and Computer Science and Engineering, **University College of Engineering– BIT Campus** *Tiruchirappalli –620 024*

Venue: B-217, Dr. APJ Abdul Kalam Auditorium, University College of Engineering, BIT Campus, Tiruchirappalli - 24

About The Institution of Engineers(India)

The Institution of Engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform for sharing professional interest. IEI has membership strength of above 0.8 million. Established in 1920, with its headquarter Kolkata, IEI has served the engineering fraternity close to a century. During this period of time, IEI has been inextricably linked with the history of modern-day engineering.

In 1935, IEI was incorporated by Royal Charter and remains the only professional body in India which has been accorded this honour. Today, its quest for professional excellence hasgiven ita place of pridein almostevery prestigious and relevant organization across the globe. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating through its 124 Centres located across the country and 6 overseas chapters. Besides, IEI has bilateral agreements with about 31 international bodies and membership of another 8 international bodies of the developed nations across the globe.

Being recognized as a Scientific and Research Organization (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, IEI promotes the cause of research and development by providing Grant-in-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

IEI has been recognized as Scientific and Industrial Research Organization (SIRO) by the Ministry of Science & Technology, Government of India and besides conducting its' own research, provides Grant-in-aid to UG/PG/PhD students of Engineering institutes and universities.

IEI holds the International Professional Engineers (IntPE) Register for India under the global International Professional Engineers Alliance(IntPEA). The institution also awards the Professional Engineers (PE) Certification.

IEI in collaboration with Springer regularly publishes peer-reviewed international journal infive series, namely, Series A, Series B, Series C, Series D and Series E covering fifteen engineering disciplines.

About Tiruchirappalli Local Centre:

Tiruchirappalli Sub-Centre of IE (I) was formed in 1973and was elevated as Local Centre in 1987 after the membership crossed the 500th mark. Presently, the membership is more than 2605. Our Local Center isfunctioning in its own premises located in BHEL campus onthe land leased by BHEL, Tiruchirappalli. The building was declared open by Shri P.S Gupta, CMD, and BHEL inAugust 1990. The institution houses a library having morethan 5000 books from various divisions for the benefit of students and members. Our Centre celebrated its Golden Jubilee during this to mark the completion of 50 years of its formation and its meritorious service to the Engineering community. The Local Centre has a very closeliaison with leading engineering organizations, professional Institutions and sister professional bodies inthe conduct of Technical activities. For details, please see: http://ieitiruchi.org/

IEI TLC Address:
IE(I)Tiruchirappalli LocalCentre,
BHEL Main Office Road, BHEL
Tiruchirappalli 620 014 , tiruchirapallilc@ieindia.org, 9442571576

ABOUT THE UNIVERSITY COLLEGE OF ENGINEERING (UCE), BIT CAMPUS, ANNA UNIVERSITY, TIRUCHIRAPPALLI

University College of Engineering (UCE), BIT Campus, Anna University, Tiruchirappalli has been established in1999 and now functioning as a constituent college of Anna University, Chennai. UCEBIT Campus, Anna University has become sufficiently multifaceted with 7 Faculties with 16 Teaching Departments including some specialized programmes. Our institute has NBA Accreditation and offers10 B.E/B.Tech. Undergraduate degree programmes, 8 M.E/ M.Tech Master's degree programmes along with MBA, MCA and Ph.D. programmes in all discipline with 4628 students in the campus. We are the TEQIP II sponsored institution with UGC 2f & 12B status. The unique dimension of the institute's educational profile harnesses the research and teaching interests of the faculty to forge its own character and to bring an extra value-addition to it. The departments of our institute are carrying out specialized and socially responsive interdisciplinary research. Our institute has 2 Centers funded by DST and AICTE. UCE, BIT Campus received research and consultancy from various funding agencies of India for a total value of 300 million Rupees. The main objective of the institutes to generate a horde of highly creative professionals, who can contribute not only to the Human Resource Development and also to Nation building exercise.

ABOUT THE DEPARTMENT

The Department of Civil Engineering has commenced B.E. Civil Engineering course in the year 2008 with an intake of 120 seats. B.E. Civil Engineering Tamil Medium was started in the year 2010 with 30 seats of intake. M.E. Environmental Engineering course was commenced in the year 2010 with 12 seats. In addition, the department offers Part-Time M.E. Course in Structural Engineering with 25 seats. Since its inception in the year 2007, the Department has conducted various workshops, a national seminar, national level technical symposiums and conferences.

The Department of Computer Science and Engineering aims to develop students into world-class technocrats with practical skills to create innovative information systems. Besides teaching undergraduate and postgraduate courses, many students are enrolled in research programs, both full-time and part-time, in areas such as image processing, text mining, theory of computation, data mining and warehousing, wireless sensor networks, and network security. Faculty members actively secure grants for R&D activities, with three sponsored projects totaling Rs. 48.93 lakhs from organizations like the University Grants Commission, the All-India Council for Technical Education, and the Ministry of Information Technology.

About the Theme:

AgriShield is a specialized workshop aimed at addressing key agricultural challenges such as crop diseases and unpredictable monsoon patterns that threaten food security, farmer incomes, and rural livelihoods. The workshop explores how cutting-edge technologies— **Artificial Intelligence (AI)**, **Machine Learning (ML)**, and the **Internet of Things (IoT)**— can enhance resilience and productivity in agriculture.

The program will focus on real-time sensor data, predictive analytics, and smart decision-support systems that enable early detection of plant diseases, forecast climate changes, and offer timely, data-driven guidance to farmers. Key topics include AI-powered disease detection using drone and satellite imagery, IoT-based soil and climate monitoring, ML for pest and weather prediction, and AI in precision irrigation and nutrient management.

Participants will engage in hands-on sessions with IoT tools and AI platforms and explore real-world case studies showing improved yields, reduced input costs, and better risk management. The workshop will bring together farmers, researchers, agri-tech innovators, and policymakers to promote collaboration and adoption of digital farming.

AgriShield aims to empower stakeholders with practical knowledge and tools to build sustainable, climate-smart agricultural systems for the future of India and beyond.

- **AI-Based Disease Detection**
  Early identification of crop diseases using drone/satellite imagery and AI.
- **IoT-Driven Field Monitoring**
  Real-time tracking of soil, weather, and crop conditions using smart sensors.
- **ML for Pest & Climate Prediction**
  Forecasting pest outbreaks and monsoon patterns with machine learning.
- **Precision Farming Solutions**
  Optimizing water, fertilizer, and input use through AI-guided techniques.
- **Digital Advisory Systems**
  Delivering timely, data-backed guidance to farmers via mobile platforms.

Resource Persons
Expert members from R&D sector, industries and various leading academic institutions.
Eligibility
IEI Members, UG Students, PG Scholars, Faculty Members and Research Scholars
How to Apply:
Registration for the seminar can be made by sending the duly filled in application
Through mail or by filling the registration ink given below on or before25.08.2024.

Registration Link:
https://docs.google.com/forms/d/e/1FAIpQLSdyDO7OvmHPZu4XN1lgB0RO-R8Fivsg0Nb2-0WNUm-tYuYnAQ/viewform?usp=dialog
Note:

- Limited seats are only available
- On-spot registration is also available but Pre-registration is mandatory
- The registration will be confirmed on first come first served basis

Registration Fee

Industry Person/Non Member/Research Scholars: **Rs.475/-**
Student Member of **IEI: Rs. 400/- (Registration fee includes Tea & Lunch during Seminar.)**

Bank Name : **State Bank of India**
A/CNo   **10891417887**
A/C Name   : **The Institution of Engineers (India), Trichy Local Center**.
IFSCcode   : **SBIN0001363**.

NATIONAL ORGANIZING COMMITTEE	
Chairman :	**Er. VB Singh**, President, IEI
Co-Chairman :	Er Jai Prakash Naryan, Chairman Agriculture Engineering Division Board, IEI
Convener	Dr G.Venkatesan AP-Civil, Dr R.Arunprakash AP-CSE, UCE, – BIT Campus
Members	Dr. Nutan Kumar Dash, FIE, Vice President, IEI Prof (Dr) M.Chowde Gowda Prof (Dr) Nemichandrappa M Er Vasant Dattatraya Pandarkar
	Dr.Mohan Kumar A P, Agriculture Engineering Division Board, IEI Trichy
	Secretary: Er. SP Lakshmanan, Hon. Secretary, Tiruchirappalli Local Centre, IEI

ORGANIZING COMMITTEE

Chief Patron	The Convener Committee Members, Anna University, Chennai
Patron	Prof. J. Prakash Registrar, Anna University, Chennai
Convener	Prof. P. Hariharan Director (CCC), Anna University, Chennai.
Organizing Secretary	Prof. T. Senthilkumar Dean, UCE - BIT Campus
Chairman:	Dr.S. RAVIMARAN, Chairman, IEI Tiruchirappalli Local Centre

CONDUCT DETAILS

Er. S.P Lakshmanan Secretary, IEI Tiruchirappalli Local Centre 9442571576, tiruchirapallilc@ieindia.org	**Dr R.ArunPrakash & Dr G.Venkatesan, University College of Engineering– BIT Campus, Tiruchirappalli 620 024** 7010402962,9486814120 arunitvijay2014@gmail.com gvenkat1972@yahoo.co.in

Registration Form

Two Day All India Workshop

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Venue: B-217, Dr. APJ Abdul Kalam Auditorium, University College of Engineering, BITCampus, Tiruchirappalli

Name:(BlockLetters) ....

Organization/Institution:...

Designation/Class...

Branch:...

IEI Membership Number & Division:..

Address for communication:..

....

Mobile:...Email:..

I/We enclose a Cash/NEFT details for Rs.........................Transaction ID No....................Dated..............

Signature