SCOPE OF THE WORKSHOP

The scope of this workshop is to provide an environment to the participants to explore the convergence of IoT and AI, explaining the mutual relationship between these technologies, and how their combination fuels innovation across various industries.

Participants will get hands-on experience by working on real-world projects or case studies to apply their newly acquired skills and knowledge.

The workshop will provide an environment for participants to collaborate, share ideas, and network with fellow attendees and experts in the field.

WORKSHOP OBJECTIVES

- Participants will explore the convergence of IoT and AI, explaining the mutual relationship between these technologies, and how their combination fuels innovation across various industries.
- Participants will be equipped with practical skills by delving into prevalent tools and techniques like MATLAB, Nessus, LabView, NMap etc., enabling them to implement IoT and AI solutions effectively.
- Explore the current landscape of IoT and AI, examining emerging trends, potential challenges, and ethical considerations to better prepare participants for future developments.
- Participants will get hands-on experience by working on real-world projects or case studies to apply their newly acquired skills and knowledge.
- The workshop will provide an environment for participants to collaborate, share ideas, and network with fellow attendees and experts in the field.

WHO CAN ATTEND

- Registration is open to Faculty members from all disciplines of Engineering/Sciences/Mathematics, Post-Doctoral Fellows, Research Scholars and PG/UG students.
- Number of seats are **limited**.
- **No TA/DA will be given to the participants.**
- The participants will be selected based on their academic/research credentials and first-come-first-serve basis.
- The selected applicants will be provided food & accommodation at IIIT Una.

REGISTRATION LINK

https://bit.ly/IoT-AI/

REGISTRATION PROCEDURE

- Only selected candidates will be informed by email/phone, therefore the candidates must provide valid E-mail IDs and phone while doing the online registration.
- The selected candidates will have to acknowledge and accept the offer for participating in the workshop through return email, failing which the wait-listed candidates may be called for the workshop.

IMPORTANT DATES

Registration Opens :	19 March, *2024*
Last date for Application :	12 *April, 2024*
Workshop Dates :	22-26 *April, 2024*

CERTIFICATION

Certificate will be provided to the participant upon successful completion of the workshop with 100% attendance and securing a minimum of 60% marks in quiz.

Indian Institute of Information Technology Una Himachal Pradesh
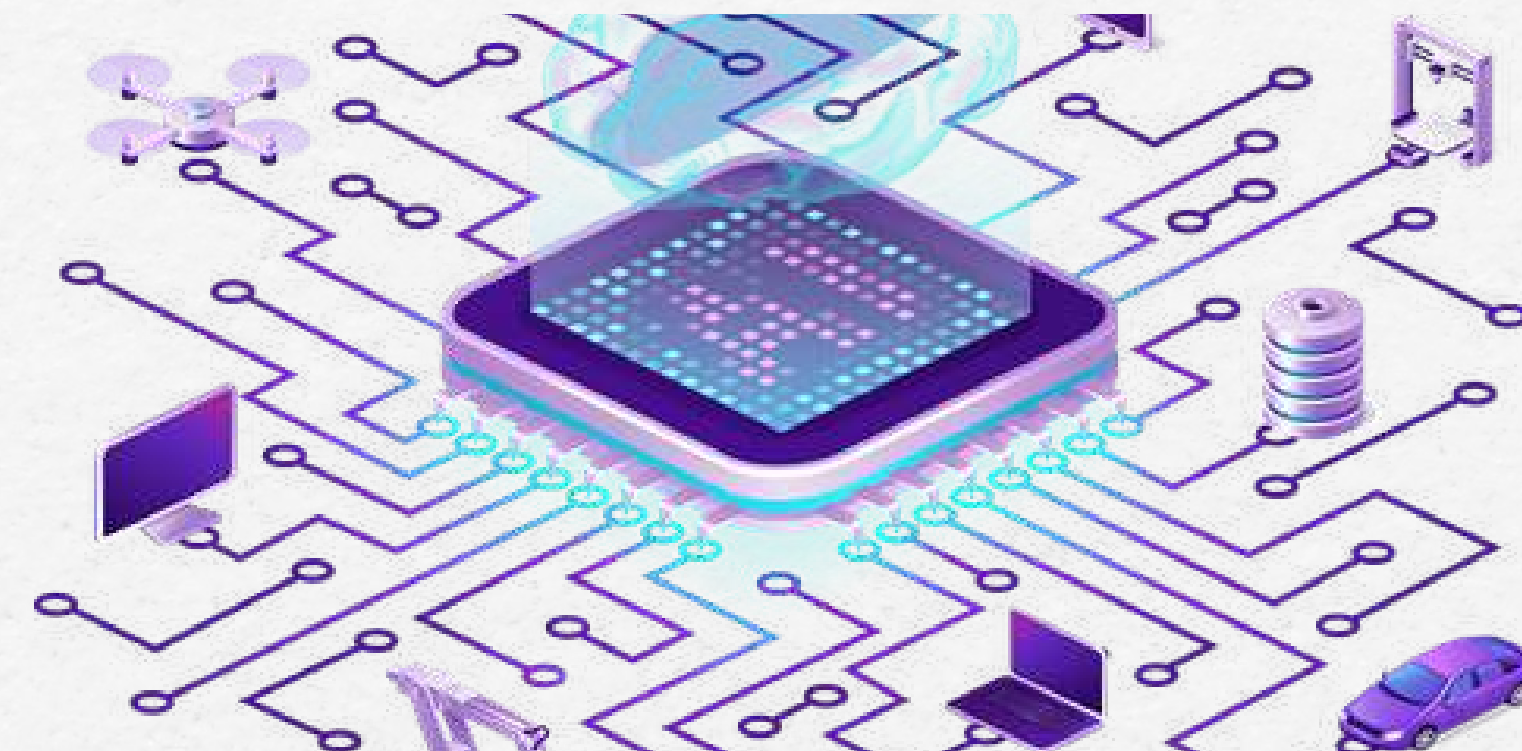(An Institute of National Importance under MoE)

One-Week Workshop
On
Internet of Things and Artificial Intelligence: Emerging Trends, Tools and Techniques
APRIL 22-26, 2024

Sponsored by:
Science and Engineering Research Board (SERB), DST, GoI

Organized by:
School of Computing
भारतीय सूचना प्रौद्योगिकी संस्थान ऊना हिमाचल प्रदेश
Indian Institute of Information Technology Una
Himachal Pradesh-177209

ABOUT IIIT UNA

IIIT Una is one of the 20 IIITs being set up, funded, and managed by the MoE, GoI, under the Public-Private Partnership (PPP) model in the year 2014, an Institute of National Importance (INI) by an Act of Parliament, GoI. The partners involved in setting up IIIT Una are the Ministry of Education, Government of India, the Government of Himachal Pradesh, HP Power Corporation Limited, and HP Power Transmission Corporation Limited. Admissions to the undergraduate programs at the Institute are made through the Joint Entrance Examination (JEE) Main.

SCHOOL OF COMPUTING (SOC)

The School of Computing, established in 2014, offers UG, PG, and PhD programs in Computer Science & Engineering and Information Technology. The aim of the department is to enable students to acquire specialized knowledge for various subjects in computer science & information technology, as well as to enrich the students personal, social and cognitive development to meet challenges of today and tomorrow. The department is well equipped with high end computers, latest software & state-of-the-art IT infrastructure and all these computing resources are inter-connected with high speed internet. Our students are exposed to up-to-date curriculum, technology and techniques. The department has well experienced & dedicated faculty members with different specializations.

ABOUT SERB

Science and Engineering Research Board is a statutory body under the Department of Science and Technology, Government of India, established by an Act of the Parliament of India in 2009. The Board is chaired by the Secretary to the Government of India in the Department of Science and Technology.

SERB aims to promoting basic research in Science and Engineering and to provide financial assistance to persons engaged in such research, academic institutions, research and development laboratories, industrial concerns and other agencies for such research and for matters connected therewith or incidental thereto are the primary and distinctive mandate of the Board.

CHIEF GUEST - INAUGURATION
Prof. Manoj Thakur
Professor, IIT Mandi

CHIEF GUEST - VALEDICTORY
Prof. Geeta Sikka
Professor, NIT Delhi

RESOURCE PERSONS
- Prof. Vrijendra Singh, IIIT Allahabad
- Dr. Sandeep Kumar Sood, NIT Kurukshetra
- Dr. D N Sonawane, COEP Pune
- Dr. Siddharth Chauhan, NIT Hamirpur
- Dr. Munish Bhatia, NIT Kurukshetra
- Dr. Mohit Dua, NIT Kurukshetra
- Dr. Ankit Kumar Jain, NIT Kurukshetra
- Dr. Pankaj Kumar Verma, NIT Kurukshetra
- Dr. Mohit Kumar, NIT Jalandhar
- Dr. Urvashi, NIT Jalandhar
- Dr. Samayveer Singh, NIT Jalandhar
- Dr. Prashanth Rajam, VIT Amravati
- Dr. Jhilik Bhattacharya, TIET, Patiala
- Dr. Sahil, NIT Delhi

TOPICS
- IoT and its Future Applications
- Cloud Computing and Applied IoT
- Secure Communication among IoT Devices
- Simulating Secure Communication among IoT devices using Wireshark and NMap
- Vulnerability analysis using attack graphs using Nessus
- AI based resource allocation for IoT System using AWS
- Power Aware Wireless Technologies for IoT Communication
- Connected Machinery: Exploring Industrial IoT in Manufacturing
- Performance evaluation of LoRa LPWAN Technology in IoT
- Localization Applications using IoT based LiFi with LabView
- Time Series Analysis for IoT Applications
- Predictive AI for Intelligent Transport System
- Future research challenges for emerging IoT applications

PATRON
Prof. Binod Kumar Kanaujia, Director, IIIT Una

CONVENOR
Dr. Shatrughan Modi, SoC
Dr. Mrityunjay Singh, SoC

COORDINATOR
Dr. Ankur Kumar, SoE
Dr. Naman Garg, SoE
Dr. Tanu Wadhera, SoE

CO-COORDINATOR
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