



ISEA Workshop on Secure Systems Engineering

Organized by

Indian Institute of Technology Guwahati
Under ISEA – Project Phase II

Hosted by

Cochin University of Science and Technology

3rd May, 2022

9:00 AM – 1:00 PM

Coordinators

Prof. Dr. Rekha K. James

Dr. Deepti Das Krishna

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About ISEA

Information Security Education and Awareness (ISEA) project is an initiative of Ministry of Electronics and IT, Government of India to reach out to the students, faculty members and, researchers in order to make them aware and educate them in the domain of information security. Keeping in view the About ISEA pervasive nature and impact of cyber security on all walks of life, Government of India has identified Information Security as one of the major thrust area for launching various research, development and awareness programs. One of the key elements essential for information security is availability of right kind of qualified and well trained human resources, who could take up Research & Development (R&D), develop indigenous solutions /software, secure and maintain various systems including critical infrastructure. With this objective ISEA project facilitate fully funded academic research, internships for faculty and students, and conduct various online and offline events across the country.



About IIT Guwahati

Indian Institute of Technology Guwahati (IITG), the sixth member of the IIT fraternity was established in 1994. IITG has been able to build up world class infrastructure for carrying out advanced research and has been equipped with state-of-the-art scientific and engineering instruments. IITG campus is on a sprawling 285 hectares plot of land on the north bank of the river Brahmaputra around 20 kms from the heart of Guwahati city. The [Department of Computer Science and Engineering](#), started its academic program in the year 1995 and is celebrating 25th year of its inception. It provides an outstanding research environment complemented by excellence in teaching. The department offers B.Tech., M.Tech., and Ph.D. degree programs. The department has around 30 faculty members actively involved in various cutting edge research in the field of computer science engineering. System security is one of the most vibrant and prominent research groups in IIT Guwahati.



About CUSAT

Cochin University of Science and Technology (CUSAT) was initially constituted as the University of Cochin through an Act of Kerala Government on 10th July 1971. The University of Cochin was re-constituted as Cochin University of Science and Technology in February 1986, redefining its objectives as "promoting Graduate and Post-Graduate studies and Advanced Research in Applied Sciences, Technology, Industry, Commerce, Management and Social Sciences." CUSAT is now a world-ranking university with the specific purpose of nurturing higher education, emphasizing post-graduate studies and research in applied science, technology, industry, humanities, and commerce. CUSAT has also found a place in the QS World University Ranking and the National Institutional Ranking Framework (NIRF) of the Indian Government. The research activities are supported and funded by the Central Government agencies like UGC, DST, DBT, MHRD, etc., as well as by various international research partners through various MoUs.



Workshop Overview

In recent years, with large data explosion, need for high performance computing systems are on an exponential rise. IoT and cloud-based architectures with powerful computing systems at the back end are crucial to meet the growing demand of data and compute intensive applications. Security of this eco system depends on the security of edge, fog, cloud and underlying system infrastructure. We explore how these devices impacts our life and the challenges of the same from security point of view. Workshop also provides a platform for formal as well as informal interaction between participants and resource persons to discuss about possible avenues of collaborations, internship and career opportunities in IITs.

Workshop Objective

- ▶ To comprehend the role of IoT in day-to-day life and to introduce IoT infrastructure – Edge, Fog, and Cloud devices
- ▶ To understand IoT building blocks, applications, and case studies
- ▶ To unfold the security challenges and issues in embedded edge devices.
- ▶ To introduce emerging on-chip interconnects used in modern devices and selected security challenges and mitigation techniques

Resource Person



Prof. Sukumar Nandi
Senior Professor,
IIT Guwahati



Dr. John Jose
Associate Professor
IIT Guwahati

Workshop Contents

- ▶ Role of IoT, Edge and Cloud devices in the modern world.
- ▶ IoT Security Challenges and Countermeasures.
- ▶ Security Challenges in Embedded Edge Devices.
- ▶ Secure Interconnect Design for Embedded and Edge Devices.

Who can Attend?

Students and faculty from CSE, ECE and IT or from any stream who are passionate about security domain.

Registration Details

- ▶ NO REGISTRATION FEE
- ▶ [Click Here to Register](#)
- ▶ Shortlisting is on First Come First Serve Basis
- ▶ Shortlisted candidate will receive a confirmation email within 24 hours to complete registration formalities.
- ▶ Certificates will be given ONLY to participants who attend the program in-person.

LAST DATE FOR REGISTRATION: Sunday, 1st May, 2022