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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Report on KSSEM Participation in “National Students Workshop” on Internet Engineering

Date: 2 September 2025

Time: 10.30 am– 4pm

Venue: Aryabhatta Seminar Hall and HDL Lab, Dept. of ECE, KSSEM, Bangalore

Target Audiences: V semester Students

No. of Participants: 26 (V Semester A and B Section)

Faculty Coordinator: Dr. Renuka V Tali, Branch Counselor of KSSEM IEEE Student Branch

Objective:

- To provide students with awareness and practical knowledge on Internet Engineering and Measurement.
- To expose students to global Internet standards bodies like IETF through AIORI initiatives.
- To prepare KSSEM ECE students for participation in National and International Hackathons.
- To strengthen KSSEM's visibility and contribution to Internet research and standards development.

Introduction

The Department of Electronics and Communication Engineering, in association with the KSSEM IEEE Student Branch, actively **participated** in the “**National Students Workshop**” on Internet Engineering held on 2nd September 2025. This workshop was organized under the AIORI Internet Engineering, Measurement and Standards Engagement Platform, which aims to build India's ecosystem in Internet engineering, standards, and research.

Background

Prior to the national workshop, Dr. Renuka V Tali, attended the Regional Faculty Workshop on 28th July 2025. In this session, experts delivered awareness talks on Internet engineering, measurement, and standards. A Raspberry Pi based Internet Measuring Device was provided to faculty, along with instructions to:

- Register on the AIORI portal as Faculty Ambassador.
- Enroll the Internet measuring device as an anchor node in the AIORI system.



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- Engage students in registering on the portal and motivate them to take part in upcoming national and international workshops/hackathons.

Student Awareness Seminar – 28th August 2025

As part of her ambassadorial responsibilities, Dr. Renuka V Tali conducted a seminar on 28th August 2025 for pre-final year students of ECE, focusing on:

- Creating awareness about hackathons and their role in innovation.
- Explaining opportunities available through the AIORI platform.
- Encouraging students to actively participate in the upcoming “National Students Workshop” on Internet Engineering.

Workshop Details – 2nd September 2025

The workshop was conducted online from 10:30 AM to 4:00 PM and was structured as follows:

Morning Session (10:30 AM – 1:00 PM):

- Technical talks by national and international experts.
- Awareness on Internet measurement, diagnostics, resilience, and standards engagement.
- Insights into the role of organizations like IETF and opportunities for students to contribute to global standards.

Afternoon Session (2:00 PM – 4:00 PM):

- Hands-on sessions where students worked on Internet measurement techniques such as PING, Trace route, DNS analysis.
- Exposure to the AIORI portal and mobile app for real-time data collection and Internet performance analysis.
- Demonstration of benchmark tools for measuring latency, throughput, and resilience of networks.

KSSEM Participation

A total of 26 pre-final-year students from ECE Dept., KSSEM actively took part in the workshop. They gained valuable knowledge on:

- Internet health monitoring and diagnostics.
- Emerging research directions in Internet engineering.
- Hands-on experience in Internet measurement through the AIORI portal.
- Pathways to engage in AIORI hackathons and IETF Working Groups such as IPPM, DELEG, MAPRG, and BMWG.



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Involvement of IEEE and National Bodies

The **AIORI Internet Engineering initiative** is strongly supported by IEEE and several national organizations, enhancing its credibility, reach, and impact. The involvement includes:

- IEEE Standards Association – Guiding the alignment of AIORI research and measurement activities with international Internet standards.
- IEEE India Council – Actively supporting academic initiatives and student participation in AIORI workshops.
- AIORI National Team – Driving the Internet Engineering and Measurement initiative across Indian academic institutions.
- Department of Telecommunications (DoT), Government of India – Supporting resilient Internet infrastructure and fostering academic–industry collaboration.
- National Internet Exchange of India (NIXI) – Engaging in DNS, IP allocation, and promoting Internet health monitoring initiatives.
- iifon (India Internet Foundation) – Promoting Internet development and awareness across the country.
- Manthan – Supporting innovation-driven initiatives and academic-industry collaboration in Internet technologies.
- Internet Society Pulse – Providing global datasets and insights on Internet health, resilience, and outages.
- Office of the Principal Scientific Advisor to the Government of India – Facilitating national policy alignment and research priorities.
- Ministry of Electronics and Information Technology, Government of India – Enabling policy frameworks and digital infrastructure programs to strengthen India’s Internet ecosystem.

Role of Faculty Ambassador

As the Faculty Ambassador for AIORI at KSSEM, Dr. Renuka V Tali played a crucial role in:

- Bridging the gap between faculty training and student involvement.
- Ensuring KSSEM’s representation in the AIORI platform and registering the Raspberry Pi Internet measuring device.
- Conducting a seminar on 28th August 2025 to create awareness about hackathons and guide students.
- Motivating and registering students for the National Workshop.
- Guiding students to take up assignments related to Internet measurement and preparing them for national and international hackathons.



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REGIONAL FACULTY WORKSHOPS

Join us for an enriching experience in collaboration with IEE India Council, IEEE Bangalore Section and CHRIST University Bangalore central Campus

Date & Venue
28th July 2025
Christ University, Bangalore - Central Campus

Workshop Highlights

- Only mentors (faculty members) attending this workshop will be eligible to nominate their students for the two-month remote Standards Hackathon.
- Advance faculty knowledge.
- Enable student participation in national-level hackathons.
- Exclusive workshop kit for all participating faculty members.

Scan here to register

Note: The registration fee covers tea, coffee, and lunch, as well as hands-on kits that will be provided to faculty members after the training sessions.

Only 2 faculty per college allowed. Limited seats available!!!



NATIONAL STUDENTS WORKSHOP

A joint initiative of Industry Academia Young Professionals Committee (IAYPC) - 2025
IEEE India Council and India Internet Foundation (IIFON)

<https://portal.aiori.in/aiori-2/>
Contact us for any Queries: ieeelaypc@gmail.com

One-Day Student Workshop by AIORI Ambassadors
Embark on a Journey into the Heart of the Internet

Join this exclusive hybrid workshop designed to immerse students in the foundations of Internet engineering, global standards development, and the power of Internet measurement.

Participants will gain valuable insights into Internet technologies and standards, and put their knowledge into action by working on real-world problem statements during a hands-on Standards Hackathon.

Workshop Highlights:

- Explore the core concepts of Internet Engineering
- Understand problem statements and approaches to solving them
- Collaborate through dynamic team formation for 2 months long standards Hackathon
- Learn to use the AIORI Internet Measurement Platform in practice

Fig 1: Posters of Faculty and Student Workshops



Fig 2: Aiori's Internet Measuring Device



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Fig 3: Seminar by Faculty on 28th September 2025

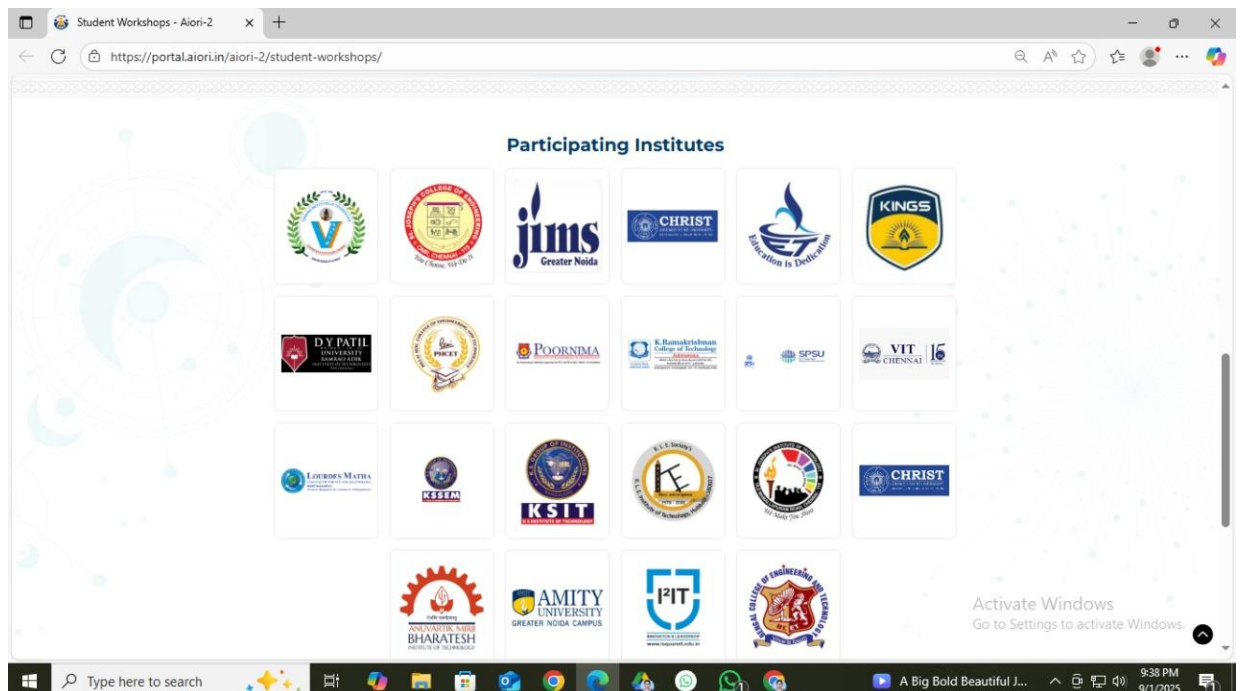


Fig4: KSSEM Visibility at AIORI's National Students Workshop



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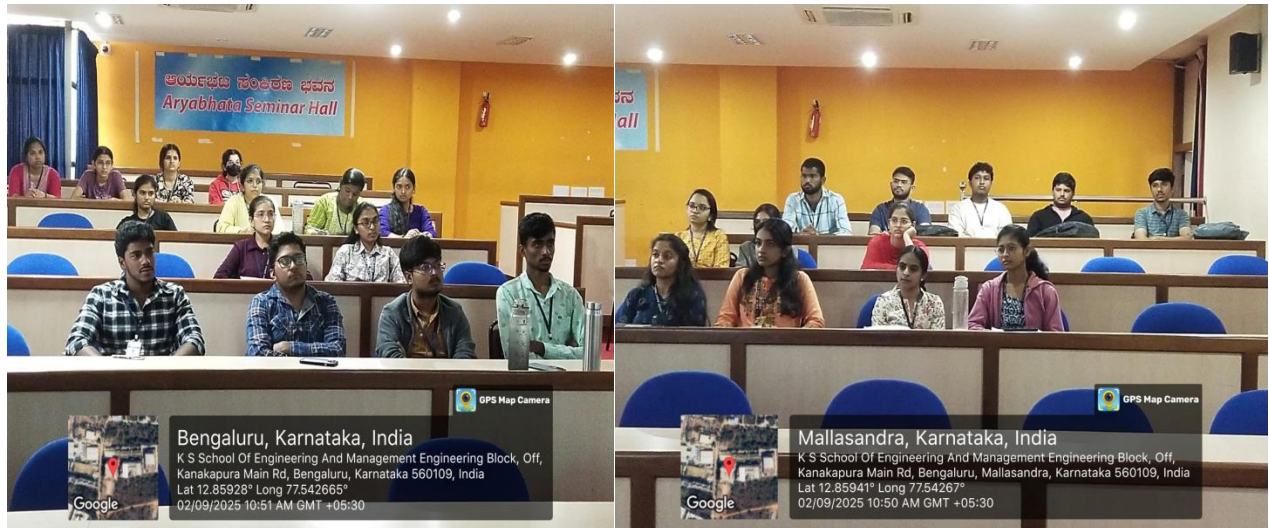


Fig 5: National Students Workshop: Morning Session-Technical Talks



Fig 6: National Students Workshop: Afternoon session-Hands-on



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Outcomes

- Students gained exposure to Internet engineering concepts, measurement tools, and standards engagement.
- Became an active participant in the AIORI initiative, aligning with national goals of building India's Internet engineering ecosystem.
- Students are now equipped to explore Internet health diagnostics, protocol measurements, and contribute to future hackathons.
- Students will continue to receive assignments, hands-on training, and guidance from faculty ambassador for AIORI hackathons at both national and international levels.

Conclusion

KSSEM's participation in the National Students Workshop on Internet Engineering marks a significant milestone in integrating students with real-world Internet research and standards development. The leadership of Faculty Ambassador Dr. Renuka V Tali has enabled the institution to contribute to the AIORI initiative and prepare students for advanced opportunities in Internet Engineering, Research, and Global Standards Engagement.