



IEEE R10 Innovation Challenge - Asia Pacific- 2025

Think.Build.Solve.Transform



TERMS OF REFERENCES

1. Introduction

The **IEEE R10 Innovation Challenge—Asia Pacific 2025 (IIC—Asia Pacific '25)** is a prestigious competition organized by **IEEE Region 10**. It aims to foster innovation, creativity, and problem-solving skills among students and young professionals. The competition provides a unique platform for participants to **think, build, solve, and transform** ideas into impactful solutions that address real-world challenges.

IEEE R10 Innovation Challenge is organized by IEEE R10 along with IEEE R10 Student Activities Committee, IEEE R10 Young Professionals Committee, IEEE R10 Women in Engineering Committee, IEEE R10 Education Activities Committee and IEEE R10 Industry Relations Committee.

Aligned with IEEE's vision of advancing technology for humanity, this initiative seeks to **empower young engineers, researchers, and innovators** to develop pioneering solutions in various domains of science, engineering, and technology. Participants will have the opportunity to engage in a **multistage competition**, undergo mentorship, and receive recognition for their innovative contributions at an international level.

Through this challenge, IEEE Region 10 aims to inspire a new generation of technology leaders by providing them with the necessary guidance, networking opportunities, and exposure to cutting-edge technological trends.

2. Objectives IEEE R10 Innovation Challenge – Asia Pacific 2025

- Encourages Innovation and Problem-Solving
- Fosters Multidisciplinary Collaboration
- Promotes Sustainable and Scalable Solutions
- Empowers Diversity, Equity and Inclusion in innovation
- Provides Global Exposure and Networking Opportunities
- Contributes to IEEE's Vision of Advancing Technology for Humanity

3. 2025 special theme- AI for Social Impact

Each year a specific theme will be selected based on the current trends and the IEEE roadmap. The 2025 year-specific theme will be **AI for Social Impact** and the following sub-categories will be considered

- AI for Healthcare & Well-being
- AI for Education, Entertainment & Empowerment
- AI for Environmental Sustainability
- AI for Public Safety & Disaster Response
- AI for Social & Economic Development

4. Timeline 2025

- Call for Applications: 20 March 2025
- Deadline for Applications: 25 April 2025
- Stage 1: July 2025 – August 2025
- Stage 2 (Final Round in Malaysia): October 2025

Two virtual workshops for the applicants, organized by IEEE R10

- Design Thinking
- Idea to Execution

5. Competition Guidelines

The **IEEE R10 Innovation Challenge** is open to IEEE Student Members, Graduate Student Members (GSM), and Young Professionals (YP) in the IEEE Region 10. Non-members must join the IEEE to be eligible to participate in the competition.

All contestants in the competition must belong to one of the IEEE Sections/Council/Subsections in Region 10.

Contestant(s) can be a team as explained below:

- Team-based- The number of team members nominated for the competition must not be more than four for any project. One of the team members must be designated as the team leader. If selected, a maximum of two members will be allowed to attend the final rounds. Additional members may join at their own expense.
- A relevant expert can act as an Academic Supervisor/Advisor for the team but must not carry out the tasks related to the project submitted. The Academic Supervisor/Advisor doesn't need to be an IEEE member.
- To qualify as a WIE team category, the majority of team members must be female IEEE WIE Student or GSM members, that is, the team can NOT have an equal or more number of males than female members. An individual who is a female IEEE WIE Student or GSM member is also eligible for the WIE category.
- Teams must not include any member from outside the Region 10

There will be two stages of the IEEE R10 Innovation Challenge

Stage 1: Virtual evaluation to select the best projects for a maximum of ten teams from submissions received from Sections/Councils/Subsections. The nominations can be submitted according to the nomination form guidelines given at <https://innovate.ieeer10.org/guidelines-rules-and-judging-criteria/>

Submission link: <https://innovate.ieeer10.org/apply/>

Stage 2: The Final Round will be held physically at a venue/virtually as announced by IEEE R10 to select winners as mentioned in section 10.

6. General Rules

- Submissions should be innovative and useful to address a real-world problem in the themes listed, but not limited to, in section 2.
- The scope may include but is not limited to engineering design, software algorithms, hardware development, sensory technology etc.
Participants are not permitted to present commercially available assembled hardware or software for the competition unless it is their own original work. Any commercially available components used in the project must be clearly disclosed, and the core innovation, design, or development must be significantly contributed by the participant(s). Failure to comply with this requirement may result in disqualification.
- For Stage 1, assessments and selection for the final round of the competition, the nominated teams will be required to submit the following material by the **announced closing date** by IEEE R10 on a date of June 2025.
 - a. A registration form (available on the competition website).
 - b. An electronic copy of an A1 (59 cm x 84 cm) size scientific poster consisting of an abstract, a short list of keywords, a brief introduction to the project, and appropriate diagrams/images to illustrate the project design and functions. The poster must be appropriately titled with the names of the project team members, and their educational institute's name(s) if appropriate.
 - c. A video presentation in MP4 format no longer than 6 minutes, showing the project's performance or an innovative concept and explaining key innovative features incorporated into the design. Any longer than 6 minutes long may result in the team's disqualification.
 - d. Endorsement from the IEEE Section to which the majority of team members belong. R10 will accept a maximum of two teams endorsed by each IEEE Section/Council/SubSection.
 - e. A testimonial letter from the team members confirming their work and no conflict of interest in presenting the work
 - f. A testimonial letter from the Academic supervisor/advisor should be included to confirm the project starting date and anticipated finish date. The academic supervisor/advisor must also mention any prior work on which the current project is based.
- Stage 1 judging will be conducted online where the team members will be required to give a live demonstration of the project and to answer judges' questions.

- Academic supervisors/Advisors can be present during the online judging, but must NOT be involved in demonstration or answer the judges' questions.
- In Stage 2, a fully functional system should be demonstrated (either physically or as a remote demonstration/ detailed video in special conditions) during the final competition rounds at a physical gathering organized by IEEE Region 10 at a venue/virtually.
- It will be the responsibility of the team to arrange appropriate set-up to demonstrate the project functions and working performance.
- The final rounds of the competition are expected to be held around October 2025. Depending on budget availability, R10 may provide partial or full financial assistance for participation in the final rounds.
- The competition will be conducted in English, i.e., all submissions, including project documentation must be in English. However, teams will be allowed to arrange the services of a translator to answer judges' questions during the competition.
- If you have participated in previous IEEE R10 Innovation Challenge competitions, the new submission must contain more than 70% of the changes. (This rule does not apply for 2025).
- The judges' decision will be final and no appeal against the judge's decision will be entertained.

7. Judging Criteria

The judging criteria given in sections 8 and 9 are broad standards and the judging panel may look into other factors if required, particularly when there is an issue of a tie between multiple teams. The decision of the judges is final at every stage of the competition.

8. Stage 1 Project Selection

For selecting the projects for the final round, the following judging criteria will apply:

- Video Presentation (Clarity and quality of video, quality of technical content, and factual and technical accuracy),
- The originality of the research and development process, and the proposed solution to meet the stated objectives shown in the poster. The poster must contain an Abstract and Keywords.
- Evidence of thought process and process for developing the project plans, identification of potential risks, and risk mitigation strategies (from submitted documents),
- Design innovation and cost-effectiveness,
- Commercial viability,
- Safety features,
- Applicability to solve Region/Global problems,
- Testing accuracy,
- Quality of documentation (Design details, software code, and testing procedures with results), and
- Satisfactory replies to judges' questions.

9. Final Round Judging

In the final round, all projects will be judged according to the following broad criteria:

- Project objectives and practical usefulness to solve a real-world problem,
- Working functions of the project,
- Design innovations & simplicity with cost-effective solutions,
- Safety features,
- Demonstrated project,
- Quality of documentation,
- Answers to the judging panel's questions

10. Prizes

The selected projects for the final round will be categorized based on functionalities or enabling technologies, based on the themes, but not limited to those mentioned in section 2.

First, Second, and Third positions, and the prizes will be:

First Position Winner – A prize worth USD 500 plus a plaque.

In case of a team winning the first position, one prize worth of USD 500 plus a plaque will be given out to the whole team. Additionally, each team member will receive a certificate.

Second Position Winner – A prize worth USD 350 plus a plaque.

In case of a team winning the second position, one prize worth of USD 350 plus a plaque will be given out to the whole team. Additionally, each team member will receive a certificate.

Third Position Winner – A prize worth USD 250 plus a certificate.

In case of a team winning the third position, one prize worth of USD 250 plus certificates for each team member.

Special Prize for the Best WIE Team – A prize worth USD 150 plus a certificate

Every individual and team member reaching the final round but not able to win a position will receive a certificate of participation in the IEEE R10 Innovation Challenge. IEEE R10 will not grant cash prizes for individuals.

For details contact Akila : akila.h.wijethunge@ieee.org or Emi Yano: emi@ieee.org

Final decisions on the IEEE R10 Innovation Challenge will rest with the judging panel and IEEE R10 Director.