

## IEEE IAS-IPCSD Engineering Student Chapter Design Contest (Africa) 2024

The goal of the project is that students belonging to an African Students Chapters design a prototype which proposes a practical engineering solution to common daily problems (e.g.: wireless power charger for common medical devices, etc.).

The proposed design needs to be within the scope of the IEEE Industry Applications Society (<http://ias.ieee.org/>) and the engineering prototype must be designed in an academic environment (non-professional).

### Eligibility:

All IEEE Students Members of African Student Chapters are encouraged to submit their proposals. Women are strongly encouraged to participate as team leaders or team members.

- Teams: 4 to 6 IEEE student/graduate members, including Team leader.
- Proposals led by a woman will have preference. Teams with a high number of diverse team members are strongly encouraged to participate. A single student chapter can submit different proposals with different team members. The section chair or advisor must be identified.
- The design must provide a practical solution to common daily problems, and it must fall within the scope of the IEEE Industry Applications Society. Project idea submitted should not be submitted to any other Award programs.
- At least one student involved in the design project must be a member of the IEEE IAS. Membership should be valid for at least 3 months.
- It is required to have a letter of recommendation from any one of these: IEEE IAS Student Branch Chapter (if any) or IEEE Student Branch or IEEE IAS Section Chapter(if any) or IEEE Section.
- This contest is exclusively for members of African student chapters. The proposal should come exclusively from student members in African sections/institutions. If the applicant is a member of the African section and is doing studies outside Africa, he/she is not eligible to apply.
- The project advisor/ mentor should be exclusively from an African University/College/institution. A member of the African section who is doing studies/ working in foreign universities cannot act as a mentor/advisor.

### Engineering design topics:

The prototype must be related but not limited to, one of the following themes:

- components and systems for motor drives
- renewable energy power conditioning systems

- components and systems for transportation electrification
- power electronics for energy efficiency and to reduce fossil fuel consumption.
- Functional apps related to motor/renewable energy/transportation electrification systems
- IoT devices
- 3D printings or rapid model
- Wireless PCB prototypes

### **Submission Requirements:**

The team must provide a short video (or link to be downloaded) not to exceed 5 minutes and presentation in PDF format showing:

- Team description including a brief presentation of the role of each member in the team.
- The problem to be solved.
- The proposed solution and why it is novel.
- Modeling and simulated results demonstrating the functionality of the proposed solution.
- Description of the design and plan for the construction of a prototype.
- Deadline for submissions: August 1, 2024.
- Awards announced: September 1, 2024

### **Criteria for Evaluation**

The submissions will be reviewed by an Evaluation Committee that will select the best 3 designs, according to:

- Innovation and impact of the proposed project.
- Diversity of the team members.
- Significance of the work to the scope of the Industry Applications Society.
- The quality of the presentation and video showing the design proposal.

### **Application will open soon**

Check <https://site.ieee.org/ias-ipcsd/scdc-africa/>

### **Contact:**

IPCSD-DEIC Liaison for Africa

[iasipcsd.competition@gmail.com](mailto:iasipcsd.competition@gmail.com)

**Deadline: August 1, 2024**

**Result Announcement: September 1, 2024**

**Awards: three awards, \$2000 each**