IEEE young professionals Tunisia Section

IEEE Robotics & Automation Society Tunisia Chapter

IEEE Robotics & Automation Society ENET'Com Student Branch Chapter

ENET'Com IEEE Student Branch

TRSYP Report

IEEE Tunisian RAS Student and Young Professional 2nd Edition

Organized By:

IEEE RAS ENET'Com
Studnet Branch Chapter

IEEE Region 8

IEEE Advancing Technology for Humanity

IEEE Tunisia Section

IEEE Tunisia Section Student Activities Committee

1- Introduction :

○ Overview of Tunisian RAS SYP 2.0

The Second IEEE Tunisian Robotics & Automation Society Student and Young Professional Congress (Tunisian RAS SYP 2.0) will take place on **November 8th & 9th, 2025,** at **the Concorde Green Park Palace**, Sousse, Tunisia, positioning itself as the leading technical innovation event in the country. Organized by the IEEE ENET'Com Student Branch in collaboration with the IEEE RAS ENET'Com Student Branch Chapter, the Congress aims to bring together over 250participants, including engineering students, young professionals, and international experts.

Tunisian RAS SYP 2.0 serves as a dynamic platform for global dialogue and collaboration on robotics and automation. The program features interactive workshops, keynote speeches, technical competitions, and real-world challenges led by national and international speakers. Participants will engage in mentorship, career development, and networking activities, fostering both technical excellence and professional growth.

This edition emphasizes hands-on experience, encouraging attendees to develop real-world solutions to real-world problems while enhancing their leadership, teamwork, and problem-solving skills, all under the guidance of industry experts and academic professionals.

○Tunisian RAS SYP 2.0's goals and objectives:

The Tunisian Robotics & Automation Society Student and Young Professional Congress (Tunisian RAS SYP 2.0), organized through the collaboration between IEEE ENET'Com Student Branch and the IEEE RAS ENET'Com Student Branch Chapter, aims to boost growth, innovation, and collaboration within the robotics and automation community, both nationally and internationally. Its key goals are:

- Advance Technical Expertise in AI and Robotics: Provide engaging workshops, competitions, and challenges that explore the role of AI in robotics, with a focus on embodied systems in vehicles and automation.
- Promote Hands-On Innovation: Encourage practical problem-solving through competitions and technical challenges that simulate real-world applications, allowing participants to build, program, and test intelligent robotic systems.
- Bridge Academia and Industry: Facilitate interaction between students, researchers, and industry professionals working on the forefront of AI and robotics, creating opportunities for knowledge transfer and potential collaboration.
- Expand the IEEE and RAS Technical Community: Grow the IEEE RAS community by engaging more students and professionals in technical tracks that highlight the value and real-world relevance of IEEE and its societies.

- Encourage IEEE RAS Membership Development Growth: Competitions and challenges will promote innovation and allow members to demonstrate their skills and research.
- We take pride in the technical excellence, innovation, and social impact of our accomplishments, which reflect the dedication and passion that drive every member of our community.

2-Tunisian RAS SYP 2.0 Program Details and contents:

This year's edition's theme, "**Embodied AI**", underscores the growing significance of Artificial Intelligence and its integration into real-world applications within the fields of robotics and automation, across multiple sectors, including industry and beyond. By addressing both the opportunities and challenges of AI-driven automation, the congress aims to shed light on the future of intelligent systems and their role in shaping a smarter, more efficient world.

Technical Aspect :

Workshops:

A series of theme-related workshops will take place, offering hands-on experiences that actively engage participants and guide them through the process of developing robotics-related projects, providing practical exposure and real-world application. The sessions will be led by experienced trainers who will support participants in understanding the fundamentals of robotics.

Technical Challenge:

To further enhance the technical dimension of our event, we are introducing a technical challenge that will be announced to the IEEE committee one month prior to the event. This will provide participants with ample time to analyze the problem statement outlined in the specification book, develop their solutions, and craft their prototypes. This challenge will be AI-driven, aligning with our theme, 'Embodied AI', and will encourage participants to apply cutting-edge techniques to real-world problems. During the event, all teams will present their innovative solutions and prototypes before a panel of highly qualified judges, showcasing their technical expertise, creativity, and problem-solving skills.

Technical Aspect :

Competition:

A total of four challenges, where each challenge consists of multiple missions that competitors must complete using their robots. This program encourages participants to use cutting-edge techniques to design and construct robots from scratch, guided by a specification book. From system architecture and hardware assembly to software integration and mission strategy, this activity not only will strengthen their practical skills but also will broaden their understanding of complex robotic systems

Round Tables Session:

A Round Table session will take place, covering a wide range of subjects aligning with the event theme “Embodied AI”. Discussions will span from soft topics, such as IEEE knowledge, networking, and professional development, to more technical subjects, including robotics, intelligent systems, and real-world applications of AI. This diversity aims to provide participants with both strategic insights and practical expertise, fostering a comprehensive understanding of the theme.

◯Technical Aspect :

Non-Technical Challenge:

At the heart of our event lies a vision: continuity, community, and growth. To turn this vision into a lasting legacy, we are holding a standout initiative , the Non-Technical Challenge, where all IEEE RAS Tunisia Section Student Branch Chapters are invited to present their proposals for hosting the next edition of the event, which encourages them to start preparing well in advance by implementing impactful programs throughout the year to strengthen their proposal and increasing their chances of winning.

Networking Activities:

Providing meaningful connections is important to cultivate a vibrant and inclusive atmosphere. So, we are organizing a series of social and networking activities designed to encourage interaction beyond formal sessions, such as icebreaker games, casual meetups, or group challenges. These moments will provide attendees with the opportunity to engage in informal conversations, build relationships with peers, professionals, and experts in a relaxed environment and promote cross-chapter interaction, and lay the groundwork for future collaborations.

◯Full Program Outline

Day 1:

Tunisian RAS SYP 2.0 Kick-Off

10:00 - 13:30	Check-in & Welcome Pack Distribution
13:30 - 15:00	Opening Ceremony & Partners Words
15:45 - 20:00	Kick-off of the competition
17:30 - 19:30	Non -Tech challenge Live Pitches Only open to participants who will pitch
19:00 - 20:00	Dinner
21:00-00:00	Networking Opportunities & Second Part OF The Competition

Day 2:

Final Day Program & Closing Ceremony

07:00 - 09:00

Breakfast

09:00 - 10:00

Round Tables, Workshops & Technical Challenge Presentations

Round Tables:

- AI Empowering Electric Vehicles charging stations infrastructure, **Ala Chalgahf**
- Inside the Drone: How It's Built, How It Thinks, How It Flies, **Wyssem Neila**
- Research Paper Writing, **Mohamed Amine Ben helal**
- Model Context Protocol (MCP) Meets IoT Devices, **Mohamed Amin Bouaziz**
- Retaining Membership: Maintaining Renewal for Student Members, **Mohamed Rebai**

Day 2:

Final Day Program & Closing Ceremony

- The Power Trio: Innovation, Entrepreneurship and Marketing with IEEE, **Hadil Drissi**
- The intersection of IoT and AI in Robotics and Automation, **Jinene Ben Said**
- ODC Round Table, **Omar marzouk**

Sessions :

- YP Session, **IEEE Tunisia YP Affinity Group**
- RAS Leaders Meet, **Yassine Anniba**
- Technical Session, **Asteel flash Company**

10:15 - 11:15 — Distinguished Lecturer Keynote: Making Humanoids Smarter by Learning from Humans Prof . Eiichi Yoshida

11:30 - 14:00 — Lunch + Check-out

14:00 — Closing Ceremony

3- Conclusion:

The Tunisian Robotics & Automation Society Student and Young Professional Congress 2.0 successfully positions itself as a strong technical event, empowering participants through a rich blend of hands-on learning, innovation-driven challenges, and professional networking. By bridging technical excellence with community growth, Tunisian RAS SYP 2.0 not only reinforces Tunisia's presence in the IEEE but also increases innovation and collaboration on a national and international scale. The Congress is poised to deliver lasting value to all attendees and partners, setting a strong precedent for future IEEE RAS initiatives.