

## Participating in IEEE SMC 2025 conference: Hackathons, Research, and Innovation

By Iyed Mdimegh, IEEE Student Member - author of "*Intelligent Chess Robot Tutor: A Low-Cost, Vision-Guided Multi-Level System with Real-Time Tracking and Advanced Gameplay Analysis*"

Last October, I attended the **IEEE SMC 2025 Conference** in Vienna, Austria, supported by a travel grant from IEEE SMC, with additional financial support from the IEEE Tunisia Section SMC Chapter. This was my first time attending an international IEEE conference, which proved to be both inspiring and educational.

The conference itself was exceptionally well-organized and brought together researchers, professionals, and students from around the world. The event included numerous presentations and exhibits, offering a firsthand look at cutting-edge technologies and innovative prototypes.

One of the conference highlights was certainly the **BR41N.IO BCI Hackathon**, put together by g.tec medical engineering GmbH and IEEE Brain, where participants from more than 50 countries worked in teams for 24 hours to develop BCI applications. Our team presented a system that could adjust music volume according to the listener's mental state, using EEG and fNIRS signals. This experience not only deepened my understanding of neurotechnology but also provided a unique opportunity to work closely with experts from diverse backgrounds and exchange ideas in a highly collaborative environment.

Besides the hackathon, our team presented a paper during the conference, detailing the development of our project, "*Intelligent Chess Robot Tutor: A Low-Cost, Vision-Guided Multi-Level System with Real-Time Tracking and Advanced Gameplay Analysis*." I want to sincerely thank my teammates for building this project with me and co-authoring the paper, our collaboration made this achievement possible. This work was initially supported by the IEEE INSAT Student Branch and further supported through a grant by the IEEE SMC Tunisia Chapter, after winning first place in the challenge organized by the chapters SMCS/IES/ES Tunisia. More information about the challenge is [here](#). Presenting our paper was satisfying, and it was gratifying to know that our work was well-received internationally.

Beyond the technical program, Vienna itself was a fantastic experience: beautiful landmarks, great local culture, and making friends with other participants. I managed to fit in sightseeing with conference sessions and hackathon activities, thus being able to experience a full professional and cultural experience.

This trip influenced my perception of innovation and collaboration. It showed how international events at the IEEE open doors to new knowledge, inspire your creativity, and foster relationships across borders. I deeply appreciate **IEEE SMC**, **IEEE Tunisia Section SMC Chapter**, and my supervisor **Ilhem Kallel**, who gave their support, enabling me to participate in this event.

I want my experience to serve as an inspiration to other budding innovators and students in the IEEE community to participate more actively in conferences, competitions, and projects. I am excited to be further involved with IEEE initiatives and look forward to more opportunities to come my way to learn, innovate, and share in the community.

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**About the Author:**

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Figure 1: Presenting the paper at IEEE SMC 2025.

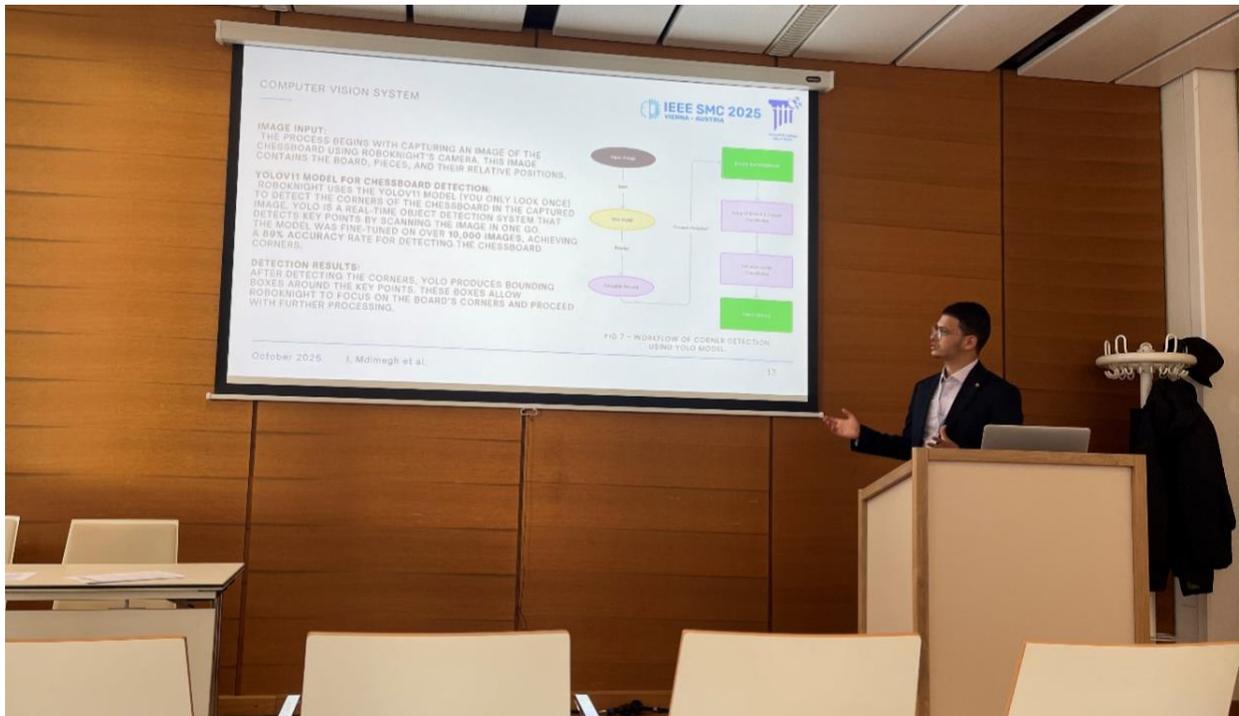


Figure 2: Delivering our presentation to the conference audience during IEEE SMC 2025.



Figure 3: With organizers and local participants of the BR4IN.IO BCI Hackathon.