IEEE Transactions on Consumer Electronics

Call for Papers

Special Section on "Human-Centered Artificial Intelligence Consumer Electronics"

Theme:

Human-centered AI (HCAI) is an emerging discipline intent on creating AI systems that amplify and augment rather than displace human abilities. HCAI seeks to preserve human control in a way that ensures artificial intelligence meets our needs while also operating transparently, delivering equitable outcomes, and respecting privacy. Consumer electronics are electronic equipment intended for everyday use, typically in private homes. Consumer electronics include devices used for entertainment, communications and recreation. So, it is important to design human-centered AI consumer electronics to meet the people's demands.

AI is in transition as the fast convergence of digital technologies and data science holds the promise to liberate consumer data and provide a faster and more cost-effective way of improving human initiatives. Particularly, AI is also heavily influencing consumer electronics nowadays. It is foreseeable that future consumer electronics will consist of a mix of humans, robots, and AI or intelligent agents.

Just like human teammates bring different skills to a team, the consumer electronic devices and AI-agent teammates, extending the capabilities of the team. Much work has been done on the interaction and effectiveness of human teams and the control of synthetic teams. However, the coordination of teams comprised of multiple humans and multiple agents is an underserved area that is rapidly increasing.

Topics of interest in this Special Section include (but are not limited to):

- Perception and Motor Control
- Modeling the Consumer Electronics Environment and Itself
- Reasoning, Problem Solving, Planning, Common Sense, Task Expertise
- Learning and Integrated Architectures
- Human-Robot Communication
- Robust Unsupervised Learning
- Knowledge-based AI for Consumer Devices Control
- Human Machine Interactions
- Integrated Cognition in Complex, Dynamic Environments
- Consumer Devices Localization, Mapping, Connection and Understanding

Important dates:

- Submissions Deadline: **May 31,** 2024
- Tentative Publication Date: 1st quarter, 2025

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Instructions for authors:

Manuscripts should be prepared following guidelines at: https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html and must be submitted online following the IEEE Transactions on Consumer Electronics instructions: https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html. During submission, the Special Section on "**Human-Centered Artificial Intelligence Consumer Electronics"** should be selected.