

IEEE Transactions on Consumer Electronics

Call for Papers

Special Section on “Secure and Trustworthy GenAI-Powered Consumer Electronics”

Theme:

The rapid advancement of generative artificial intelligence (GenAI) has revolutionized consumer electronics, introducing smart toys, AI assistants, educational robots, and other interactive devices that enhance daily life. However, as these GenAI-powered products become increasingly embedded in homes, concerns about security vulnerabilities and privacy risks have escalated. Recent studies reveal that many GenAI-powered consumer electronics collect vast amounts of sensitive data, including voice recordings, facial images, behavioral patterns, and even household environment details. Despite their convenience, these devices often suffer from insecure data transmission, excessive data collection, security vulnerabilities of AI model and insufficient content moderation, exposing users, especially children, to potential private data breaches, unauthorized surveillance, and malicious content exposure. This special section seeks high-quality research contributions that advance the development of secure and trustworthy GenAI-powered consumer electronics through innovative solutions to these critical challenges.

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

- Data privacy compliance framework
- Security and privacy metrics in GenAI
- Vulnerability assessment of commercial GenAI-powered devices
- Adversarial attacks and defense mechanisms for GenAI-powered consumer electronics
- Privacy-enhancing computing for GenAI-powered consumer electronics
- Secure data lifecycle management in GenAI-powered consumer electronics
- Content safety and moderation for child-facing AI interactions
- Privacy-preserving user profile analysis
- Machine unlearning for sensitive and malicious data removal

Important dates:

- Submissions Deadline: May 31, 2026
- First Reviews Due: July 31, 2026
- Revision Due: September 15, 2026
- Second Reviews Due/Notification: October 31, 2026
- Final Manuscript Due: November 30, 2026
- Tentative Publication Date: 1st quarter, 2027

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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 “**Secure and Trustworthy GenAI-Powered Consumer Electronics**” should be selected.