



In the dynamic landscape of human-computer interaction, the quest for heightened user experiences within the realm of consumer electronics is intricately entwined with the profound progress made in the realms of cognitive and semantic computing. This convergence of cognitive science, natural language processing, machine learning, and semantic technologies has ignited a monumental shift in the landscape of intelligent system design and deployment. It signifies a profound transformation in how individuals engage with technology, heralding a paradigmatic departure from traditional interfaces. This special issue is an expedition into the intricate interplay between cognitive and semantic computing. It serves as a platform to unveil the symbiotic relationship between these complex domains and how, together, they propel user experiences to new frontiers. The objective is to provide a comprehensive exploration of how cognitive and semantic computing synergize to elevate user interactions, touching upon a myriad of diverse domains within the expansive field of consumer electronics.

TOPICS OF INTEREST

This pioneering Special Issue in Consumer Electronics Magazine beckons the submission of groundbreaking research, theoretical expositions, and pragmatic applications that probe the intricate terrain of cognitive and semantic computing in consumer electronics. We invite contributions spanning a broad spectrum of topics, including, but not limited to:

- Adaptive content personalization and recommendation systems
- Cognitive and semantic approaches for smart homes and IoT
- Cognitive augmentation for entertainment and gaming experiences
- Cognitive computing and enhanced user interfaces
- Cognitive robotics and automation for enhanced home experiences
- Distributed cognitive computing from devices to the edge and the cloud
- Ethical considerations in cognitive and semantic computing
- Evaluating user satisfaction and engagement in cognitive interfaces
- Human-machine interaction in consumer electronics
- Immersive technologies and user experience enhancement
- Natural language processing for consumer electronics applications
- Personalized health and wellness devices and applications
- Security and privacy considerations in semantic consumer electronics
- Semantic search and knowledge graphs in consumer electronics
- Semantic technologies for advanced user experiences
- The role of generative AI in cognitive computing
- Use cases and diverse applications for cognitive computing
- User behavior analysis and insights through semantic data

AUTHOR GUIDELINES

IEEE Consumer Electronics Magazine (CEM) publishes peer-reviewed articles that present emerging trends, key insights, tutorials, practical experiences, design, and industry-related research & developments of mainstream consumer electronic products, technologies, and related fields of interest to the membership of the IEEE Consumer Technology Society (CTSoc) and broad engineering audience. CEM aims to educate and entertain on general topics related to consumer technologies and electronic products.

Submissions must follow IEEE CEM Template available in IEEE Template Selector¹, or the LaTeX template is also available on Overleaf², and should consist of the followings: (i) A manuscript of minimum 6-page length (overlength page charges are listed below): A PDF of the complete manuscript layout with figures, tables placed within the text, and (ii) Source files: Text should be provided separately from photos and graphics and may be in LaTeX or Word format. High-resolution original photos and graphics (300 dpi) are required for the final submission. Images embedded in Word or Excel documents are not suitable; however, figures and graphics may be provided in a PowerPoint slide deck, with one figure/graphic per slide.

The authors must own the copyright on any images, photographs or graphics or have obtained explicit permission for use of all such material when a third party owns the copyright. Alternatively, copyleft images and materials may be used once the relevant license terms are complied with, including citations to the original source/author. It is the responsibility of the author(s) to demonstrate such compliance and document the corresponding license agreements (a URL is sufficient) in notes accompanying the submitted article. The authors should include a PDF file with a suggested layout of the article. Figure captions must be provided and ideally figures/graphics should be cited in the text of the article. An IEEE copyright form will be required.

The manuscripts must be submitted online to the 'Special Issue on Cognitive and Semantic' track using the IEEE CEM's IEEE Author Portal³. The IEEE Author Portal will automate the generation of a single submission document if the authors have the correct files prepared in advance.

OVERLENGTH PAGE CHARGES

Articles exceeding 6 pages during author proof will be charged at US\$ 250 per page for extra pages beyond first allowed 6 pages.

IMPORTANT DATES

- **ARTICLE SUBMISSION DUE:** ~~March~~ **April 1, 2024**
(extended deadline)
- **FIRST ACCEPTANCE NOTIFICATION:** **July 1, 2024**
- **FINAL ACCEPTANCE NOTIFICATION:** **October 1, 2024**
- **APPROX. PUBLICATION DATE IN PRINT:** **Q2 2025**

GUEST EDITORS

- Vinay Chamola, Birla Institute of Technology and Science, Pilani, India & Director, AloTBlocks Pvt. Ltd. (Lead Guest Editor, vinay.chamola@pilani.bits-pilani.ac.in)
- Himanshu Thapliyal, University of Tennessee, USA (hthapliyal@ieee.org)
- Hassnaa Moustafa, Intel, USA (hassnaa.moustafa@intel.com)
- Biplab Sikdar, National University of Singapore, Singapore (bsikdar@nus.edu.sg)
- Amir Hussain, Edinburgh Napier University, UK (a.hussain@napier.ac.uk)

¹ IEEE Template Selector: <https://template-selector.ieee.org/>

² LaTeX Template at Overleaf: <https://www.overleaf.com/latex/templates/ieee-consumer-electronics-magazine-template/xphtjrbwmvrz/>

³ IEEE Author Portal: <https://ieee.atyponrex.com/journal/cemag/>