

Enhancing Diversity of Consumer Technologies

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■ **I WELCOME THE** readers to the fifth issue of the year 2023, the September/October issue of the IEEE Consumer Electronics Magazine (*MCE*).

Consumer technologies have become an integral part of everyone's daily lives, profoundly influencing how users communicate, work, and seek entertainment. As the demand for innovative and user-friendly products continues to surge, it is imperative to prioritize diversity in the development and implementation of these technologies. Embracing diversity not only fosters inclusivity, but also enables the creation of comprehensive and accessible solutions that cater to a broader range of user needs. Ensuring inclusivity stands as a crucial aspect of enhancing diversity in consumer technologies. Going beyond surface-level representation, diversity in consumer technologies necessitates adopting a user-centered design approach that thoroughly considers the needs, abilities, and preferences of users. Additionally, enhancing diversity in consumer technologies entails focusing on accessibility and assistive technologies. Integrating accessibility features such as screen readers, closed captions, voice recognition, and adjustable font sizes empowers individuals with visual or auditory impairments to fully engage with and benefit from consumer technologies. Moreover, incorporating assistive

technologies expands the capabilities of consumer products, making them more versatile and adaptable to user requirements. Consumer technology products should duly recognize and accommodate cultural and linguistic diversity. This encloses providing multilingual interfaces, localized content, and culturally relevant features. Enhancing diversity in consumer technologies is not solely a matter of social responsibility, but also a strategic imperative. By prioritizing representation, inclusivity, user-centered design, and accessibility, consumer technologies can evolve into comprehensive, accessible, and user-centric solutions. Such an approach will empower a broader range of individuals to fully leverage the vast potential of technology, ultimately bridging the digital divide and creating a more inclusive and equitable digital society.

The current issue of *MCE* aims to explore the significance of enhancing diversity in consumer technologies and the potential benefits it can bring. Therefore, it is my pleasure to provide practitioners and researchers with high-quality, state-of-the-art articles dedicated to various consumer technology applications.

COLUMN

Quantum in Consumer Technology: This column explores a rapidly developing field that has the potential to revolutionize a wide range of industries, including consumer technology.

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FEATURE ARTICLE

Fog Intelligence for Secure Smart Villages—Architecture, and Future Challenges: This article explores the integration of distributed fog computing (DFC) with the Internet of Things (IoT)-based smart villages to improve the quality of life for villagers and CE devices from a security and privacy perspective. Security-by-Design for intrusion detection system (IDS) with the integration architecture of DFC in IoT-based smart villages is discussed. This article also presented the possible integration of several emerging technologies with IDS-based distributed fog computing to improve security and privacy solutions in a smart village. Various security and privacy challenges that require the research community's attention are discussed.

SPECIAL SECTION: INTERNATIONAL CONFERENCE ICCE-BERLIN

The special section is dedicated to the IEEE CTSoc's International Conference of Consumer Technology in Berlin (ICCE-Berlin)¹ and presents an invited set of articles. I would like to thank the Guest Editor, Dr. Gordana Velikic, for all her

sincere effort and hard work for this strong special section, which will be excellent reading for the readers of the *MCE* as well as the researchers around the globe.

LOOKING FORWARD

I hope that the current issue becomes a good read for a broader set of the Consumer Technology community to advance their knowledge. *MCE* will continue the trend of covering more themes for enthusiastic and dedicated readers in future issues on the current and emerging topics with the active support from the editorial board members, reviewers, and authors worldwide.

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¹<https://www.icce-berlin.org/>

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