

Editorial

The Special Issue on Innovation in Computing, Engineering Science & Technology (2023) in the *Advances in Science, Technology and Engineering Systems Journal (ASTES Journal)* reflects the continued evolution of technological innovation driven by the seamless integration of computational intelligence and engineering advancements. As digital transformation accelerates across industries, the convergence of computing and engineering disciplines has become a defining force in shaping modern scientific inquiry and practical applications. This issue presents a collection of high-quality contributions that highlight emerging trends, novel methodologies, and transformative solutions across interconnected domains.

A central focus of this issue is the advancement of intelligent, data-driven systems that are redefining engineering processes and decision-making frameworks. Several contributions explore the application of artificial intelligence, machine learning, and advanced analytics in optimizing system performance, enhancing automation, and enabling predictive and adaptive capabilities. These innovations are applied across a wide range of sectors, including smart manufacturing, communication networks, robotics, and intelligent infrastructure, demonstrating the versatility and impact of computational approaches in engineering science.

The issue also underscores progress in core engineering innovations, particularly in areas such as sustainable technologies, advanced materials, and energy-efficient system design. Authors present research that addresses critical global challenges, including resource optimization, environmental sustainability, and resilient infrastructure development. The integration of computing technologies with engineering systems is especially evident in emerging paradigms such as the Internet of Things (IoT), cyber-physical systems, and next-generation communication architectures, where interdisciplinary collaboration is essential for achieving scalable and robust solutions.

Methodological diversity remains a defining strength of this special issue. The included studies employ a combination of theoretical modeling, simulation techniques, experimental validation, and applied case studies. This comprehensive approach ensures that the research not only contributes to academic knowledge but also offers practical insights for industrial implementation and policy development. Many of the contributions emphasize system scalability, efficiency, and adaptability, reflecting the evolving demands of modern technological environments.

The 2023 context provides a backdrop of rapid innovation, increased reliance on digital ecosystems, and a growing emphasis on intelligent and autonomous systems. The research featured in this issue captures this momentum, highlighting how advancements in computing and engineering science are enabling new levels of connectivity, efficiency, and technological sophistication.

The editorial team extends its sincere appreciation to the authors for their valuable contributions and to the reviewers for their diligent and constructive feedback. Their collective efforts have ensured the scholarly rigor and relevance of this special issue, reinforcing the journal's commitment to advancing multidisciplinary research.

This special issue offers a comprehensive perspective on the innovations shaping computing, engineering science, and technology in 2023. By bringing together diverse research contributions

and forward-looking insights, it serves as a platform for fostering continued interdisciplinary collaboration and for driving progress in an increasingly complex and technology-driven world.

Guest Editor

Prof. Ahmad Yusairi Bani Hashim