

Editorial

The Special Issue on *Advancement in Engineering Technology (2017–2018)* in the *Advances in Science, Technology and Engineering Systems Journal (ASTES Journal)* presents a comprehensive collection of scholarly contributions that reflect the accelerating pace of technological innovation across engineering disciplines. The period of 2017–2018 marked a significant phase in which emerging technologies began to mature and integrate more deeply into practical engineering applications. This special issue captures that transition, showcasing research that bridges the gap between theoretical development and real-world implementation, and highlighting the transformative impact of advanced technologies on engineering practice.

A prominent theme throughout this issue is the growing role of digitalization and intelligent systems in engineering technology. Contributions emphasize the integration of advanced computational tools, automation, and data-driven methodologies to enhance system design, monitoring, and control. The incorporation of artificial intelligence, machine learning, and Internet of Things (IoT) frameworks has enabled engineers to develop smarter and more responsive systems. These advancements are evident in applications ranging from intelligent manufacturing and process optimization to smart infrastructure and real-time system diagnostics, demonstrating how digital technologies are reshaping the engineering landscape.

Another key focus of this special issue is the advancement of materials and manufacturing technologies. The research presented explores innovative materials with enhanced properties, as well as modern fabrication techniques such as additive manufacturing and advanced machining processes. These developments have significantly expanded the possibilities for design and production, allowing for greater efficiency, customization, and performance. The integration of such technologies into engineering systems not only improves product quality but also contributes to reduced waste and more sustainable production practices.

Sustainability and energy efficiency also emerge as critical considerations within the collected works. As global demand for resources continues to rise, engineering technology must evolve to support environmentally responsible solutions. The studies included in this issue address challenges related to renewable energy systems, energy management, and sustainable design practices. By focusing on efficiency, resource optimization, and environmental impact, these contributions underscore the importance of aligning technological advancement with sustainable development goals.

Interdisciplinary collaboration remains a defining feature of the advancements highlighted in this issue. The complexity of modern engineering challenges requires the convergence of expertise from multiple domains, including mechanical, electrical, civil, and computer engineering. The research demonstrates how such collaboration fosters innovation, enabling the development of integrated systems that are more efficient, reliable, and adaptable. This interdisciplinary approach is particularly evident in areas such as robotics, mechatronics, and cyber-physical systems, where the synergy between hardware and software plays a crucial role.

The editorial team extends its sincere appreciation to all authors, reviewers, and contributors whose dedication and expertise have made this special issue possible. Their collective efforts have resulted in a high-quality compilation of research that not only advances academic understanding but also provides practical insights for industry and society. It is anticipated that

the findings presented herein will inspire further research and development, encouraging continued progress in engineering technology.

The Special Issue on *Advancement in Engineering Technology (2017–2018)* highlights the ongoing evolution of engineering practices in response to rapid technological change. The contributions reflect a shift toward more intelligent, efficient, and sustainable systems, driven by innovation and interdisciplinary collaboration. As engineering technology continues to advance, it will play an increasingly vital role in addressing the complex challenges of the modern world, paving the way for a more connected and resilient future.

Guest Editor

Prof. Saleh Nabi