

Editorial Comments Volume 3 Issue 4

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Volume 3, Issue 4 of the *Journal of Computers, Mechanical, and Management* presents a collection of research articles that reflect the journal's commitment to fostering innovation and sustainability. The studies in this issue span diverse fields, addressing critical technological and environmental challenges while proposing transformative solutions.

Hayyan Nassar *et al.* [1] explore the pressing issue of artificial intelligence (AI) adoption in Kuala Lumpur's IT sector. Their research extends the Technology Acceptance Model (TAM) by incorporating the concept of perceived organizational support (POS), which plays a pivotal role in influencing both perceived usefulness (PU) and perceived ease of use (PEOU). Despite government initiatives such as Industry4WRD, the study highlights that AI adoption in the region significantly lags behind global averages. By analyzing data from 340 IT managers, the authors demonstrate how targeted organizational support measures, including resource provision and employee training, can enhance AI integration. This study not only addresses a critical gap in understanding the dynamics of AI adoption in emerging markets but also offers actionable strategies for policymakers and business leaders to accelerate digital transformation.

Advancing the frontiers of biomedical engineering, S. Indhu and colleagues [2] examine the revolutionary potential of 4D bio-printing in drug delivery systems. By introducing time as a functional dimension, this technology enables bio-printed structures to dynamically respond to stimuli such as temperature, pH, and light. The adaptability of 4D bio-printing holds immense promise for personalized medicine, allowing for the creation of drug delivery systems tailored to individual patient needs. The authors discuss key principles such as material responsiveness, environmental triggers, and programmable design, illustrating how these innovations can overcome limitations in traditional approaches. While challenges such as material scalability and regulatory hurdles remain, the insights provided in this study underscore the transformative potential of 4D bio-printing in shaping the future of healthcare. Tutku Özkan [3] provides an in-depth review of banana fiber-reinforced composites (BFRCs), highlighting their potential as sustainable alternatives to synthetic composites. With their low density, biodegradability, and high tensile strength, banana fibers represent an eco-friendly solution for industries such as automotive, construction, and packaging. The article delves into the mechanical and thermal properties of BFRCs, examining how fiber treatments, hybridization strategies, and nanofillers enhance performance. At the same time, it addresses challenges such as moisture sensitivity and fiber-matrix adhesion, proposing innovative solutions for their mitigation. This comprehensive review underscores the role of BFRCs in promoting sustainable development while meeting the performance demands of modern engineering applications.

The study by Burcu Şen [4] focuses on the tribological properties of natural fiber composites, exploring their potential for sustainable industrial applications. Tribology, the science of friction, wear, and lubrication, is critical in high-wear environments such as aerospace and automotive industries. This research provides valuable insights into abrasive and erosive wear mechanisms, emphasizing the influence of fiber orientation, filler content, and surface treatments on wear resistance. The integration of natural and synthetic fibers in hybrid composites emerges as a key strategy to balance cost, sustainability, and performance. While addressing challenges such as moisture absorption in natural fibers, the article highlights innovative approaches, including nanofillers and advanced surface treatments, to enhance durability and functionality.

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This work advances our understanding of how natural fiber composites can meet the demands of diverse industrial applications while supporting environmental goals. The articles in this issue collectively underscore the importance of integrating innovation with sustainability. From enhancing AI adoption in emerging markets to advancing materials and biomedical technologies, the contributions in this issue reflect the journal's mission to address critical global challenges through rigorous and impactful research. We extend our gratitude to the authors for their valuable contributions and to the reviewers for their thoughtful insights. We invite readers to explore these studies, which exemplify the transformative potential of interdisciplinary collaboration in science and engineering.

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