International Conference on Frontiers of Sustainability- Global Responsibility for Innovation & Entrepreneurship [FOS 2026-GRIE] [Hybrid]

22 - 24 JANUARY 2026

In collaboration with

Track 7:

Technological Innovations & Digital Transformation for Sustainability (TIDTS)

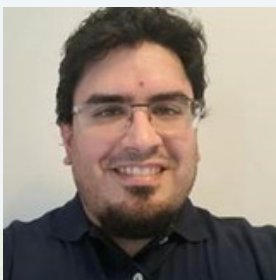**Dr. Morteza Alaeddini**
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Track Information

Digital transformation (DT) has emerged as a critical enabler of sustainability, reshaping the way organizations, governments, and industries operate. At its core, DT enhances information processing capacity, strategic alignment, and organizational flexibility— capabilities that are essential for sustainability innovation and performance (Lu et al., 2023). In healthcare and other mission-critical sectors, strategies such as knowledge development, leadership engagement, and cross-sector partnerships accelerate progress toward the UN Sustainable Development Goals (SDGs) (Ziadlou, 2021). Similarly, local governments have used DT to maintain service continuity during crises such as the one caused by the COVID-19 pandemic, when IT security and digital skills were crucial for resilience and SDG implementation (Palos-Sánchez et al., 2023). Thus, it is evident that DT is a systemic shift requiring governance, cultural change, and investment in human capital, not merely a technological upgrade. When deployed effectively, DT promotes inclusive, efficient, and transparent systems that align economic growth with environmental stewardship and social well-being.

The transformative potential of DT lies beyond organizational readiness in its ability to connect advanced technologies with sector-specific sustainability challenges. According to Varriale et al. (2025), evidence from 1,098 sustainable business practices across 17 industries shows that artificial intelligence (AI), geospatial technologies, and the Internet of Things (IoT) dominate current SDG-oriented applications, particularly for clean energy (SDG 7), responsible consumption (SDG 12), and climate action (SDG 13). These technologies optimize energy grids, enable precision agriculture, and support circular economy models. Meanwhile, blockchain enhances supply chain transparency and trust. However, social SDGs, such as gender equality and strong institutions, remain underrepresented, signaling the need for inclusive digital strategies. E-government platforms and big data analytics further localize SDGs by improving transparency, accountability, and citizen engagement (ElMassah & Mohieldin, 2020). This suggests that digital innovation has the greatest impact when paired with governance frameworks, security protocols, and participatory approaches that ensure equitable access and long-term sustainable outcomes.

This track explores how cutting-edge technologies, ranging from AI and IoT to blockchain, digital twins, and extended reality (XR), can accelerate sustainable development, optimize resource use, and facilitate the transition to circular economies. We invite researchers, practitioners, and policymakers to share insights, case studies, and theoretical contributions that highlight the transformative potential of digital solutions for sustainability.

Topics of interest

- We welcome submissions on (but not limited to) the following themes:
- Green Tech Solutions – Exploring how AI, IoT, blockchain, and edge computing can address environmental challenges such as pollution, emissions, and resource inefficiency.
- Smart Resource Management – Technologies for optimizing energy, water, and material usage through predictive analytics, sensor networks, and intelligent automation.
- Big Data & Analytics for Sustainability – Using environmental data to inform decisions in climate action, agriculture, biodiversity, and urban planning.
- Digital Platforms for Circular Economy – Online tools and marketplaces that support reuse, recycling, remanufacturing, and sustainable supply chain collaboration.
- Cybersecurity & Ethics in Green Tech – Ensuring secure and ethical deployment of digital sustainability solutions, including smart grids, IoT systems, and AI governance.
- Industry 4.0/5.0 for Sustainability – Leveraging automation, robotics, human-centric innovation, and collaborative AI to create sustainable industrial ecosystems.

- Immersive Technologies & XR – Using XR, e.g., virtual reality (VR), augmented reality (AR), and mixed reality (MR), for environmental education, low-carbon training, and virtual simulations of sustainable infrastructure.
- Nature-Positive Digital Innovation – Digital tools for biodiversity monitoring, regenerative agriculture, and nature-based solutions powered by AI and satellite data.
- ESG Data Platforms & Accountability – Technologies for transparent ESG reporting, supply chain tracing, compliance tracking, and blockchain-based verification of sustainability claims.
- Smart Cities, Infrastructure & Life Cycle Sustainability – Virtual models of urban systems, digital twins, and life cycle analysis (LCA) for emissions forecasting, resource optimization, and sustainable design decision-making.
- Life Cycle Analysis & Digital Sustainability Tools – Integration of LCA with big data, AI, and blockchain and other digital tools to measure, monitor, and reduce environmental impacts across the entire life cycle of products, processes, and services.
- Methodological diversity is welcome: We invite submissions of original research papers, case studies, conceptual frameworks, and policy analyses. Submissions should clearly explain the sustainability challenge, technological approach, and implications for innovation and entrepreneurship.
- Major Keywords
- Green Technologies; Digital and Ecological Transformation; Circular Economy; Smart Resource Management; Industry 4.0/5.0; Sustainable Innovation
- Target Audience
- Academics, industry professionals, entrepreneurs, policymakers, and sustainability advocates interested in the intersection of technology and sustainable development.

Uniqueness of the track SDG goals connected:
SDG 6 - Clean Water & Sanitation; SDG 7 - Affordable & Clean Energy; SDG 9 - Industry, Innovation & Infrastructure; SDG 11 - Sustainable Cities & Communities; SDG 12 - Responsible Consumption & Production; SDG 13 - Climate Action; SDG 14 - Life Below Water; SDG 15 - Life on Land

SUBMISSION TYPES

Research Pitch: Extended Abstract (1500 Words) It will be published in FOS 2026-GRIE conference Proceeding book with ISBN

Full Length Paper: (5,000 to 6,000 Words) It will be published in Springer proceedings (Scopus Indexed)

Publication outlet:
- All submissions will undergo a rigorous peer-review process. Based on the review outcomes:
- · Selected ideas and abstracts will be included in the Book of Abstracts (with ISSN).
- · Conference Full length papers will be published in the Springer Proceedings (Scopus Indexed).
- Selected full papers, as recommended by the conference peer-review team, will be invited for submission to one of the listed journals, in alignment with the scope of the work.

Note: For more details, please refer author guidelines in conference website
Website link: https://fos.tsm.ac.in/
Submission link: https://forms.gle/BZ4kipxiDbJpu7aj6

Major Reference

- ElMassah, S., & Mohieldin, M. (2020). Digital transformation and localizing the sustainable development goals (SDGs). Ecological Economics, 169, 106490. https://doi.org/10.1016/j.ecolecon.2019.106490
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- Palos-Sánchez, P. R., Baena-Luna, P., García-Ordaz, M., & Martínez-López, F. J. (2023). Digital transformation and local government response to the COVID-19 pandemic: An assessment of its impact on the sustainable development goals. Sage Open, 13(2), 21582440231167343. https://doi.org/10.1177/21582440231167343
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- Ziadlou, D. (2021). Strategies during digital transformation to make progress in achievement of sustainable development by 2030. Leadership in Health Services, 34(4), 375–391. https://doi.org/10.1108/LHS-08-2020-0066