Towards Sustainable and Advanced Environmental Solutions

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Call for submission. This editorial introduces the first issue of 2024 for *Embedded Selforganising Systems (ESS)* journal. The focus of this issue is AI-driven Solutions for Sustainable Environment Monitoring (Robotics and Embedded Systems).

Our journal uses electronic publication, which provides a flexible way to submit and review contributions of authors from all countries. The advantages of such an e-journal are multifarious. In comparison to traditional paper journals, we replace the classic review and creation process with a new sliding issue model. Each issue starts with an initial editorial and an official call for papers. The submitted articles will be reviewed and, if accepted, published as soon as the final version is received by the committee. Based on this process, each sliding issue can be filled successively until the maximum number of articles is reached. During this period, all accepted papers can, already be read by other researchers while other papers are still in the reviewing process. Accordingly, the time to publish shrinks to a minimum. In addition, multiple issues with different focus can co-exist at the same time, which provides completely new possibilities to react on latest research topics. The journal also allows the integration of discussions and other reactions on published articles in the same journal issue.

We are welcoming fresh ideas, on-going research technical reports and novel scientific works. We also intend to create a promising platform for creative and constructive discussions.

Towards Sustainable and Advanced Environmental Solutions

The trajectory towards a sustainable future mandate the integration of advanced environmental solutions, particularly those harnessing the capabilities of artificial intelligence (AI). The profound impact of these solutions on sustainable environment monitoring cannot be overstated. Through the implementation of AI-driven technologies, we can attain unparalleled efficiency and accuracy in monitoring environmental parameters. These intelligent systems facilitate real-time data analysis, enabling swift responses to environmental challenges. Furthermore, AI enhances predictive modeling, contributing to proactive measures in environmental conservation. Embracing these innovative solutions not only addresses current environmental concerns but also establishes the groundwork for a more sustainable and resilient ecosystem.

As we peer into the future, artificial intelligence (AI) is positioned to exert a significant influence on various aspects of human life. Already at the forefront of transformative technologies such as Big Data, robotics, and the Internet of Things (IoT), AI is expected to maintain its role as a key technological innovator. Its current impact is evident in revolutionizing leading scientific communities and industries, reshaping approaches to complex challenges. The pervasive influence of AI is set to usher in a new era of possibilities, making it a central force in shaping the technological landscape worldwide.

Amidst the challenges posed by climate change, pollution, and dwindling natural resources, there is an urgent need for more efficient methods to monitor and preserve the environment. Artificial intelligence (AI) has emerged as a pivotal solution, offering innovative approaches to enhance sustainable environment monitoring. By harnessing the power of AI-driven technologies, significant transformations have occurred in data analysis, pattern recognition, and predictive modeling. These advancements have substantially improved the accuracy, scalability, and real-time capabilities of environmental monitoring systems, empowering us to make more informed decisions and proactively safeguard our ecosystems. This paper explores the critical role of AI in sustainable environment monitoring and how its ongoing evolution is paving the way for a more resilient and sustainable future.

The pressing nature of environmental challenges underscores the need for a collaborative endeavor to leverage advanced solutions in monitoring and preserving our ecosystems. This special issue endeavors to highlight state-of-the-art research and advancements toward sustainable and advanced environmental solutions, encompassing diverse aspects of environmental monitoring and sustainability. By delving into the convergence of advanced environmental solutions, artificial intelligence, and environmental sciences, our goal is to cultivate a profound comprehension of the pivotal role that advanced environmental solutions play in shaping a more eco-friendly and resilient future.

The Embedded Self-Organizing Systems (ESS) journal comprises a set of carefully selected tracks that focus on the particular challenges regarding AI-driven Solutions for Sustainable Environment Monitoring. Topics of (ESS) journal include (but not limited to):

- Air Quality Monitoring and Pollution Control.
- Natural Disaster Prediction and Response.
- Remote Sensing for Environmental Monitoring.
- Precision Agriculture and Water Management.
- Development and deployment of AI applications in IoT and robotics domains.
- Eco-friendly Industrial Processes.
- Automotive software applications and solutions
- AI solutions for drone technology
- Explainable Artificial Intelligence
- Waste Management and Recycling Optimization
- AI and ML-based optimization methods for industrial or practical applications
- Computer Vision and Robotics
- Intelligent User Interfaces
- Machine learning and artificial intelligent systems analysis, modeling, simulation, and application in computer vision.

SUBMISSION INSTRUCTIONS

Submissions for the journal must be made as complete papers (there is no abstract submission stage) submitted as PDF documents. Authors are requested to submit papers reporting original research results and experience. The page limit for regular papers is 4 to 6 pages and short papers are from 2 to 4 pages. Papers should be prepared using the IEEE two-column template. An MS Word template or ESS online journal is available here https://www.bibliothek.tu-chemnitz.de/ojs/index.php/cs/information/authors

Papers should submit following link of journal:

https://www.bibliothek.tu-chemnitz.de/ojs/index.php/cs/about/submissions

Submission Deadline: 30.10.2024

The conference fee will be free.

Review in 2 weeks after submission.

Camera ready paper for publication should be submit in 2 weeks after review notes.

Thanks in advance for Your Contribution!