Special Issue

Application and Development of Artificial Intelligence Technology in Forestry Management

Message from the Guest Editors

Research into forestry operations is pivotal to global ecological security and sustainable development. Forests, covering 31% of Earth's land area, sustain 80% of terrestrial biodiversity and support the livelihoods of over 1.6 billion people. However, climate change, wildfires, and pests contribute to an annual loss of 10 million hectares of forests, exacerbating biodiversity collapse and carbon sink degradation. Optimizing forest operations through technology-driven strategies has therefore become critical. Developing scalable solutions that balance economic viability with ecological preservation requires urgent interdisciplinary research into AI-enhanced monitoring, precision harvesting, and adaptive management frameworks.This Special Issue aims to explore cutting-edge advancements in AI-driven solutions for sustainable forest management. By integrating technologies such as machine learning, the IoT, and remote sensing, AI is revolutionizing forest management.By fostering convergence across ecological science, data engineering, and policy design, we aim to establish AI as indispensable to next-generation sustainable forest management.

Guest Editors

Dr. Weijun Xie

Dr. Ying Liu

Dr. Deyong Yang

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Message from the Editor-in-Chief

Forests (ISSN 1999-4907) is an international and cross-disciplinary, scholarly forestry journal. The distinguished editorial board and refereeing process ensures the highest degree of scientific rigor and review of all published articles. Original research articles and timely reviews are released online, with unlimited free access. Our goal is to have *Forests* be recognized as one of the foremost publication outlets for high quality, leading edge research in this broad and diverse field. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global forestry community.

Editor-in-Chief

Prof. Dr. Giacomo Alessandro Gerosa
Department of Mathematics and Physics, Catholic University of Brescia, I-25121 Brescia, Italy

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