Special Issue

Synergistic Use of Time-Series Remote Sensing, Deep Learning, and AI for Land Transformation Monitoring

Message from the Guest Editor

Global landscapes are undergoing unprecedented changes due to factors like urbanization, climate change, deforestation, and agricultural intensification. These shifts demand advanced, reliable tools to track land use and land cover dynamics over time. Time-series remote sensing provides a wealth of consistent, long-term data, unaffected by short-term disruptions, capturing trends across seasons and years. Deep learning AI complements this by offering sophisticated methods for pattern recognition, predictive modeling, and automated data processing, enabling precise detection and interpretation of complex land changes. Together, they form a transformative approach to understanding land transformation and supporting sustainable management practices. This Special Issue explores the powerful combination of time-series remote sensing data and deep learning artificial intelligence (AI) to monitor and analyze land transformation processes. The objective of this Special Issue is to compile pioneering research that showcases how these technologies synergize to address critical land transformation challenges.

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Land is the only open access journal covering all aspects of land science, and it is a pioneering platform for publishing on land system science. Our editorial board is comprised of eminent scholars. We publish high quality research on societally relevant, emerging and innovative topics and results in land system research. It is now one of the top land journals with a significant Impact Factor, and has a goal to become the best journal in land in the coming years.

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