Special Issue

Urban Land Use Mapping Using Deep Learning

Message from the Guest Editors

Urban Land Use Mapping (ULUM) plays a pivotal role in reconciling cities' dual identities as engines of economic growth and focal points of socio-environmental challenges. However, conventional remote sensing approaches face inherent limitations in ULUM due to spectral ambiguities (e.g., same-object-different-spectra phenomena in mixed-use areas) and resolution constraints.

Advancements in deep learning (DL), particularly foundation models like SAM (universal image segmentation), GPT (cross-modal reasoning), and Deepseek (multi-task optimization), are revolutionizing ULUM by enabling robust urban object recognition and multi-source heterogeneous data fusion (e.g., SAR–optical–social alignment).

This Special Issue aims to advance ULUM by leveraging deep learning to address critical challenges in spectral ambiguity, multi-scale dynamics, and human activity integration. This Special Issue invites submissions that synergize multi-modal data, advanced algorithms, and urban-specific applications.

Guest Editors

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Message from the Editor-in-Chief

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

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