



Special issue on “Vision Language Models in Remote Sensing”

Guest Editors

Xiang Li, King Abdullah University of Science and Technology (xiangli92@ieee.org)

Xiao Xiang Zhu, Technical University of Munich (xiaoxiang.zhu@tum.de)

Gui-Song Xia, Wuhan University (guisong.xia@whu.edu.cn)

Sherrie Wang, Massachusetts Institute of Technology (sherwang@mit.edu)

Timo Balz, Wuhan University (balz@whu.edu.cn)

Mohamed Elhoseiny, King Abdullah University of Science and Technology (mohamed.elhoseiny@kaust.edu.sa)

This special issue seeks to explore the emerging field of Vision Language Models (VLMs) in remote sensing. VLMs represent a groundbreaking integration of computer vision and natural language processing technologies, designed to enhance the interpretation and interaction with RS data through a more nuanced understanding of both visual and textual information. By bridging the gap between visual recognition and semantic understanding, VLMs offer a comprehensive framework that exceeds traditional visual tasks by enabling sophisticated semantic analysis and natural language description capabilities. More importantly, by combining vision models with LLMs, VLMs can take advantage of prior knowledge from pretrained LLMs in order to solve complex reasoning tasks.

This special issue accepts regular/review/tutorial papers on the following topics:

Vision-language foundation models in remote sensing

Remote sensing Image/video captioning

Text-based remote sensing image generation and retrieval

Remote sensing visual question generation and answering

Remote sensing visual grounding (localization or segmentation)

Language-guided few-/zero-shot learning in remote sensing

Chatbot for remote sensing data

Articles submitted to this special issue of the IEEE Geoscience and Remote Sensing Magazine must contain significant relevance to geoscience and remote sensing and should have noteworthy technical/tutorial/review value. Selection of invited papers will be done on the basis of 4-page White papers, submitted in double-column format. These papers must discuss the foreseen objectives of the paper, the importance of the addressed topic, the impact of the contribution, and the authors' expertise and past activities on the topic. Contributors selected on the basis of the White papers will be invited to submit full manuscripts. Manuscripts should be submitted online at <http://mc.manuscriptcentral.com/grsm> using the Manuscript Central interface. Prospective authors should consult the site <http://ieeexplore.ieee.org/servlet/opac?punumber=6245518> for guidelines and information on paper submission. Submitted articles should not have been published or be under review elsewhere. All submissions will be peer reviewed according to the IEEE and Geoscience and Remote Sensing Society guidelines.

Special Issue tentative schedule:

October 31, 2024	White paper submission deadline
November 30, 2024	Invitation notification
January 31, 2025	Full paper submission deadline
March 31, 2025	Review notification
May 31, 2025	Revised manuscript due
July 31, 2025	Final acceptance notification
August 31, 2025	Final manuscript due
November 2025	Publication date