

Workshop on Multimodal Foundation Models for Remote Sensing and Agriculture (MFM-RsAg)

Co-located with 2024 ACM Multimedia Asia (ACM MM Asia 2024)

December 3, 2024, Auckland, New Zealand



mfm-rsag.github.io

This workshop focuses on exploring the potential of multimodal foundation models in analyzing remote sensing data to provide innovative solutions for agricultural tasks, such as weed management, yield prediction, and crop mapping. Remote sensing data includes a wide range of types, such as hyperspectral, multispectral, LiDAR, SAR, thermal imaging, satellite and UAV imagery, time series, geospatial data, and radar. By leveraging multimedia modeling technologies, the workshop aims to enhance the analysis of this diverse data and advance applications in sustainable agriculture. It will bring together researchers from fields like computer science and remote sensing to collaborate on using foundation models for remote sensing and agricultural applications.

Call for Papers

We welcome research contributions focusing on the following (but not limited to) topics on remote sensing data driven by multimodal foundation models:

- **Foundation model and remote sensing data encoding**
 - Representation learning
 - Self-supervised/Unsupervised learning
 - Transfer learning and fine-tuning
 - Sequential (spatial or temporal) encoding
 - Multi-modal/multi-temporal/multi-sensor/multi-resolution learning and fusion
- **Foundation model guided remote sensing understanding**
 - Pattern recognition
 - Segmentation
 - Downscaling/super-resolution/image enhancement in spectral/spatial/temporal domains
 - Sequence understanding/temporal understanding
 - Change detection
 - Object detection and classification
 - Anomaly detection
- **Foundation model driven applications**
 - Land cover and land use mapping
 - Environmental monitoring
 - Crop health assessment
 - Soil property assessment
 - Vegetation index calculation
 - Yield prediction
 - Climate change understanding and sustainable development
 - Weather forecasting
- **Public benchmark datasets in remote sensing and agriculture for foundation model construction**

Important Dates

1 October 2024, 23:59	Paper Submission Due
12 October 2024, 23:59	Author Notification
15 October 2024, 23:59	Camera-Ready Version Submission Due
3 December 2024, 9:00 (NZDT)	Workshop

All dates are specified as 'Anywhere on Earth' (AoE).

Submission Guidelines

Submissions should adhere to the ACM Multimedia Asia 2024 formatting guidelines and will undergo a rigorous peer-review process. Accepted papers will be presented at the workshop and included in the workshop proceeding of the conference*. We also welcome submissions of demos, datasets, and position papers that contribute to the workshop's themes. The template can be found via: [ACM MM Asia Regular Paper Submission Guidelines](https://mmasia2024.org/call_for_regular.html): https://mmasia2024.org/call_for_regular.html

Page limits: each paper is 4-6 pages (not including references).

Papers have to be submitted via: <https://cmt3.research.microsoft.com/MMAAsia2024>.

Click 'Create new submission' and select the track 'Workshop on Multimodal Foundation Models for Remote Sensing and Agriculture'.

*All accepted papers need to pay the register fees.

Organizers

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