

Special Session 1

AI-DRIVEN MEDICAL IMAGING: FOUNDATIONS,
APPLICATIONS, AND CLINICAL TRANSLATION

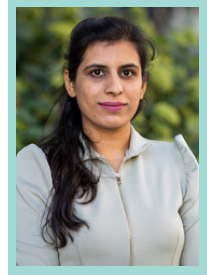
TOKYO, JAPAN | MARCH 17-19, 2026



Special Session Chairs

o Deepika Koundal, University of Eastern Finland
(dkoundal@uef.fi)

o Kanika Bhalla, Washington University, St. Louis,
USA (bhalla@wustl.edu)



Description

Medical imaging has entered a transformative era driven by artificial intelligence (AI), enabling automated diagnosis, treatment-response prediction, multimodal fusion, and accelerated clinical workflows. Despite significant progress in deep learning, robust clinical translation remains challenging due to domain shift, limited annotated datasets, and the need for generalizable, interpretable models.

This Special Session brings together researchers working at the intersection of machine learning, medical image analysis, and human-computer interaction to present advances in imaging biomarkers, deep neural architectures, self-supervised learning, and clinically validated AI pipelines. The session will emphasize model reliability, explainability, and integration with clinical decision-making, highlighting real-world deployments across oncology, neurology, and radiology.

We welcome contributions that push the boundaries of AI-driven medical imaging—from foundational algorithms to translational studies.

Topics Covered

- Deep learning methods for medical image classification, segmentation, and detection
- Multimodal fusion of imaging with clinical, genomic, and textual data
- Explainability, uncertainty quantification, and clinician-AI interaction
- Self-supervised and domain-adaptive learning for medical imaging
- Clinical translation, deployment, and validation of AI imaging systems

About MLHMI 2026

2026 7th International Conference on Machine Learning and Human-Computer Interaction (<https://www.mlhmi.org/>) will be held in Meiji University Surugadai Campus, Tokyo, Japan during March 17-19, 2026. Accepted and registered papers will be published in MLHMI 2026 CPS Conference Proceedings, which will be submitted to IEEE Xplore, and be submitted for indexing to Ei Compendex, Scopus.

Submission Method: <https://www.zmeeting.org/submission/MLHMI2026>

Submission Deadline: January 15, 2026

More information: <https://www.mlhmi.org/submission.html>

Contact

Conference Secretary: Ms. Jassica Yao

Email: mlhmi.conference@gmail.com