

**Workshop on
Multispectral Imaging for Robotics and Automation
(MIRA)
co-located with ACCV 2024 and ACML 2024
Hanoi, Vietnam - December 8th, 2024**

Organizers

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Introduction (<https://multispectral4ra.github.io/>)

Multispectral imaging is revolutionizing the fields of robotics and automation by providing richer information beyond the visible spectrum. Traditional RGB cameras capture only a narrow band of the electromagnetic spectrum, limiting the data available for computer vision systems. Multispectral cameras expand this capability by sensing light across a broader range of wavelengths, including infrared, ultraviolet, and other portions of the spectrum invisible to the human eye.

This additional spectral information unlocks powerful new applications in robotics and automation. Multispectral data can be used for enhanced material classification, detecting various objects, identifying chemical signatures, and perceiving environmental factors like moisture and temperature. Additionally, in autonomous driving, multispectral imaging allows vehicles to detect lane markings better, read traffic signals, and identify obstacles in challenging conditions like adverse weather situations and darkness. Such capabilities have transformative potential for industrial inspection, agricultural automation, search and rescue operations, self-driving cars, and countless other domains.

The Multispectral Imaging for Robotics and Automation (MIRA) workshop aims to bring together leading researchers exploring this emerging interdisciplinary area at the intersection of multispectral imaging, computer vision, robotics, and automation.

Call for Papers

We invite researchers and practitioners to submit original and unpublished work to the Multispectral Imaging for Robotics and Automation (MIRA) workshop. Relevant topics include but are not limited to:

- Multispectral image acquisition and sensor fusion

- Multispectral object detection, tracking, and segmentation
- Industrial inspection with multispectral vision
- Agricultural monitoring and automation
- Non-line-of-sight imaging for autonomous vehicles
- Multispectral perception for adverse weather conditions
- Novel applications of multispectral data in robotics and automation
- Multispectral image reconstruction
- Spectral unmixing and material classification
- Domain adaptation and transfer learning for multispectral data
- Multispectral dataset curation and benchmarking

Important Dates

Call for papers announced: July 9, 2024

Paper submission deadline: **September 14, 2024**

Notifications to accepted papers: September 20, 2024

Paper camera ready: September 30, 2024

Workshop date: **December 8, 2024**

All accepted papers are going to be published in the ACCV 2024 Workshop proceedings and Springer ACCV 2024 Workshop LNCS. For more details please visit MIRA workshop website.