

Preface: Technical Commission III (Remote Sensing)

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The publication of the papers presented at the 25th ISPRS Congress provides an up-to-date overview of the advances made over the last four years in the field of photogrammetry and remote sensing. In the case of Technical Commission III « Remote Sensing », these papers focus on Earth observation in all aspects of its development: imaging systems, data processing and quality, as well as their applications. Given the social, environmental and climate challenges of our time, this work highlights promising trends that have scientific and operational implications and stimulate further research. These papers represent the latest output from Commission III's working groups following four years of work. These 12 working groups cover remote sensing data processing and understanding (WG III/1), spectral and thermal data processing and analytics (WG III/2), active microwave remote sensing (WG III/3), land use and land cover change detection (WG III/4), remote sensing for inclusive pathways to equality and environmental health (WG III/5), remote sensing of the atmosphere (WG III/6), hydrosphere and cryosphere (WG III/7), remote sensing for agricultural and natural ecosystems (WG III/8), geospatial environment and health analytics (WG III/9), planetary remote sensing and mapping (ICWG III/II), disaster management (ICWG III/IVa), remote sensing data quality (ICWG III/IVb). During the 25th Congress, Commission III also hosted specific sessions which broadened the scope of its working groups, namely, advancements in wildfire science, management, and engagement: integrating EO and collaborative development (ThS1), multimodal large language models for remote sensing image modalities (ThS7), satellite image super-resolution in the era of generative AI (ThS8), Earth observation for crop health and resilient food systems (ThS22), monitoring biodiversity from space (ThS25), cooperation on ground motion monitoring for disaster risk reduction and resilience (SpS3), remote sensing of atmospheric components for climate change and air quality: bridging ISPRS and AERSS (SpS4).

We would like to thank the officers responsible for coordinating the Commission's working groups and the organisers of the thematic and special sessions, who encouraged the submission of high-quality papers; the authors who chose to present their work at the 25th ISPRS Congress and to publish it in the Annals and Archives dedicated to this event; and the volunteer reviewers who devoted their time to assessing the submissions, thereby ensuring the quality of the published papers.