

PREFACE: TECHNICAL COMMISSION II

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ISPRS Technical Commission II focuses, at various scales, on geometric, radiometric and multi-temporal aspects of image- and range-based 3D surveying and modeling. Specifically, Commission II deals with image orientation, point cloud generation and processing, 3D feature extraction, dynamic and static scene analysis, sensor and data fusion, and machine learning for geospatial data analysis and big data techniques for massive data processing. Applications in the fields of mapping, infrastructure monitoring, heritage studies, space exploration, underwater photogrammetry and environmental engineering are also considered.

The Volume related to Commission II contains 108 papers published in the ISPRS Archives and 20 published in the ISPRS Annals. The papers in Archives were accepted from among 111 abstract submissions and 59 full papers. Of the 108 Archives papers, 32 were full paper submissions and 76 were abstract submissions. The 20 papers in the Annals were selected from among 59 full paper submissions after going through a peer review process.

In the aforementioned areas of research, the papers in this volume discuss the challenges and needs, and introduce novel photogrammetric solutions that depict the latest developments in the field.

There has been a wide range of coverage of these topics and point cloud generation and processing has been the most active coverage with close to 38% of the accepted papers. This is followed by machine/deep learning methods with 31.8% that provide solutions to the semantic enrichment of images and 3D data. Research in heritage and underwater studies is represented with 9% and 6%, respectively, of the accepted papers.

We believe these volumes nicely recap the state-of-the-art, current trends and possible applications of photogrammetry on a wide range of topics with a nice overview of the future research directions.

On behalf of Technical Commission II, we would like to thank the local organizers of the 2021 ISPRS Congress, the members of the international program committee, all Working Group officers and all reviewers for their hard organizational work and efforts in the paper reviewing process.