

IVMSP 2020

IEEE 14th Image, Video,
and Multidimensional
Signal Processing
Workshop

23-26 June 2020
Nafplio, Greece



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Big Data processing and analytics on Copernicus data

SPECIAL SESSION

Call for Papers

The 2020 IEEE 14th Image, Video, and Multidimensional Signal Processing Workshop (IVMSP 2020) will be held in June 23-26, 2020 in Nafplio, the capital of the first Hellenic Republic (Greece). It will bring together leading experts from academia and industry to share the most recent and exciting advances in image, video, and multidimensional signal processing and analysis.

Image analysis with novel, supervised, semi-supervised or unsupervised learning, is already part of our lives and is extensively entering the space sector to offer value-added Earth Observation (EO) products and services. Large volumes of satellite data are frequently coming to the Earth from the Sentinel constellation, offering a basis for creating value-added products that go beyond the space sector. The visual analysis and data fusion of all streams of data need to take advantage of the existing Data and Information Access Services (DIAS) and High Performance Computing (HPC) infrastructures, when required by the involved end users to deliver fully automated processes in decision support systems. Most importantly, interpretable machine learning techniques should be deployed to unlock the knowledge that is hidden in big Copernicus data.

This special session includes presentations of novel research in:

- Indexing and retrieval of Copernicus data
- Novel value-chains using both EO and non-EO datasets
- Data cube analytics on time-series of satellite imagery
- Knowledge extraction and data mining on big Copernicus datasets
- Machine learning techniques for supervised classification of satellite images
- Machine learning techniques for unsupervised and semi-supervised learning on satellite imagery
- Distributed machine learning techniques on High Performance Computing environments
- Data augmentation and pseudo-labeling
- Explainable Artificial Intelligence (XAI), feature selection and feature engineering
- Causality analysis to infer statistical associations in observed data sets

PAPER SUBMISSION

The language of the Workshop is English. Prospective authors are invited to submit full-length papers (up to 4 pages for technical content including figures, tables, references and one optional 5th page containing only references). IEEE templates for the paper format, and "no show" policy apply. Authors should indicate one or more of the above listed categories that best describe the topic of the paper. Submitted papers will be peer-reviewed by at least two experts in the field. To maximize visibility and impact as early as possible, all accepted papers will be published in IEEE Xplore through Open Preview and will be freely accessible and downloadable in final format beginning one month before the Workshop. In addition to the technical program, a social program will be offered to the participants and their companions. It will provide an opportunity to meet colleagues and friends against a backdrop of outstanding natural beauty and rich cultural heritage in one of the best-known international tourist destinations.

SPECIAL SESSION ORGANISERS

- Ioannis Papoutsis, National Observatory of Athens, Greece
- Charalampos Kontoes, National Observatory of Athens, Greece
- Vassilios Sitokonstantinou, National Observatory of Athens, Greece
- Guido Vingione, Serco SpA, Italy

IMPORTANT DATES

- Submission of full papers – April 2, 2020
- Notification of acceptance – April 20, 2020
- Author advance registration – May 2, 2020
- Camera-ready paper submission – May 2, 2020

