

# IVMSP 2020

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

23-26 June 2020  
Nafplio, Greece



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## Multimodal Analysis and Retrieval of satellite images

### SPECIAL SESSION

### Call for Papers

The 2020 IEEE 14<sup>th</sup> 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.

Deep learning and semantic technologies have recently introduced a paradigm shift in the domain of Earth Observation (EO) via generating higher level knowledge and combining heterogeneous data streams to enable the development of nontraditional downstream services. Copernicus data and other georeferenced data sources are often highly heterogeneous, distributed and semantically fragmented. Semantic web technologies are used to publish the data contained in the various repositories in RDF. Semantically annotated data become interconnected and thereby easily accessible by the users. The value of the original data is therefore increased, encouraging the development of deep learning applications of higher value.

This special session includes presentation of novel research in:

- Concept extraction from satellite images
- Change and event detection over satellite image time series
- Fusion of EO and non-EO imagery
- Multimodal image retrieval in georeferenced data
- Geo-localization of multimedia content
- Reinforcement learning and active learning on multispectral images
- 3D-models and animations of multispectral content
- Semantic analysis on Copernicus data for multispectral image retrieval
- Linked Earth Observation data for semantic multispectral image retrieval
- Deep Learning on satellite images
- Deep learning architectures (CNN, RNN, LSTM, etc.) on satellite images
- Deep Learning on Multimodal geospatial data
- Generative Adversarial Networks (GANs) on satellite imagery
- Semantics through word embeddings on satellite image metadata

### 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 5<sup>th</sup> 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

- Dr. Ilias Gialampoukidis, Centre for Research and Technology Hellas, Greece
- Dr. Stefanos Vrochidis, Centre for Research and Technology Hellas, Greece
- Dr. Ioannis Kompatsiaris, Centre for Research and Technology Hellas, Greece

### 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

