



CALL FOR PAPERS

IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing

Special Issue on “Advanced remote sensing data analysis for sustainable development”

Sustainable development is the management and conservation of natural resources, and the orientation of technological and institutional changes to guarantee the attainment and continued satisfaction of human needs for present and future generations. Retrieving reliable and accurate information on the interaction between human lifestyle and environment on global scale is therefore paramount to achieve the United Nations Sustainable Development Goals (UN-SDG). To this aim, remote sensing (RS) plays a crucial role. The ability to provide a synoptic view of large areas at regular intervals makes RS data an essential source of information for analyzing dynamic phenomena occurring on the Earth's surface. Moreover, to attain some of these goals, there exists the need to develop emerging methods and advance the capacity of the RS community in extracting semantic information from RS data.

The proliferation of RS data also gives rise to an increasing complexity of the data themselves, in terms of larger diversity and higher dimensionality. This development offers the opportunity for better monitoring and more precise characterization of key environmental parameters. On the other hand, in order to take advantage of these opportunities for monitoring sustainable development, there is a need to develop innovative methodologies, including those based on data fusion, computer vision, cloud computing, and artificial intelligence.

The topics of interest for this special issue will include, but not be limited to, the following:

<i>Extracting information on sustainability parameters</i>	<i>Development of advanced methods for remote sensing data analysis</i>
Biophysical parameters assessment	Physical-chemical information processing
Natural resources use, potentials and limits	Data-driven feature extraction from multimodal datasets
Climate change impact on polar, temperate, and tropical regions	Inference learning for upscaling information to large-scale analysis
Water quality assessment	Advanced methods for multitemporal RS data analysis
Atmospheric pollution estimation	Dynamic phenomena characterization
Monitoring natural disasters and catastrophic events	Semantic understanding of Earth surface and transfer learning for global analysis
Environmental impact on communities and infrastructures	Deep learning algorithm for semantic tasks
Responsible consumption and production	Scalable computing for RS information extraction

Schedule

December 1, 2020: Submission system opening
May 30, 2021: Submission system closing

Format

All submissions will be peer reviewed according to the IEEE Geoscience and Remote Sensing Society guidelines. Submitted articles should not have been published or be under review elsewhere. Submit your manuscript on <http://mc.manuscriptcentral.com/jstars>, using the Manuscript Central interface and select the “Advanced remote sensing data analysis for sustainable development” special issue manuscript type. Prospective authors should consult the site <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=902768> for guidelines and information on paper submission. All submissions must be formatted using the IEEE standard format (double column, single spaced). Please visit http://www.ieee.org/publications_standards/publications/authors/author_templates.html to download a template for transactions. Please note that as of Jan. 1, 2020, IEEE J-STARS has become a fully open-access journal charging a flat publication fee \$1,250 per paper.

Guest Editors

Andrea Marinoni
Claudia Paris
Stefania Matteoli
Fabio Pacifici
Sivasakthy Selvakumaran

UiT the Arctic University of Norway, Norway (andrea.marinoni@uit.no)
University of Trento, Italy (claudia.paris@unitn.it)
National Research Council, Italy (stefania.matteoli@ieiit.cnr.it)
Maxar, USA
University of Cambridge, UK (ss683@cam.ac.uk)