

Call for Papers
Special Issue on Big Data from Space
IEEE Transactions on Big Data

Big Data from Space refers to the massive spatio-temporal Earth and Space observation data collected by space-borne sensors, and their use in synergy with data coming from other ground based sensors or sources. This domain is currently facing sharp development with numerous new initiatives and breakthroughs ranging from computational sensors to space sensor web, covering almost the entire electromagnetic spectrum from Gamma-rays to radio-waves, or from gravitational to quantum principles. The analysis of these data largely contributes to the broad scientific effort to understand the Universe and to enhance life on Earth. The recent multiplication of open access initiatives to Big Data from Space is giving momentum to the field by widening substantially the spectrum of scientific communities and users as well as awareness among the public while offering new benefits at all levels from individual citizens to the whole society.

In this Special Issue, we solicit high-quality scientific research articles, in areas, but not limited, to Earth Observation, planetary sciences, Space and Security, deep space exploration, astrophysics, satellite telecommunication, navigation and positioning systems, addressing key challenges and innovative solutions on how Big Data paradigms can improve the space sciences, technologies, and applications. Topics of interest include, but are not limited to:

- Data from space and suborbital sensor cooperating networks
- Computational sensing and imaging
- On-board data handling functions and technologies
- Data transfer and telecommunication systems
- Data preservation, storage, dissemination and computing platforms
- Information retrieval and knowledge extraction
- Data mining and visual analytics
- Data Science
- Scalability in any sense
- Semantic and knowledge representations
- Quantum resources
- Performance metrics and benchmarking

Submission Instructions

Before submitting your manuscript, please ensure you have carefully read the Instructions for Authors for IEEE Transactions on Big Data (TBD). The complete manuscript should be submitted through TBD's submission system. To ensure that you submit to the correct Special Issue (SI), please select the appropriate section in the dropdown menu upon submission. In your cover letter, please also clearly mention the title of the SI (Special Issue on Big Data from Space).

Important Dates

~~01/31/2018 Paper submission due~~

02/28/2018 Extended submission deadline

03/31/2018 1st round review due

04/30/2018 1st revision due

05/30/2018 2nd round review due

06/31/2018 2nd revision due

07/15/2018 Final due

Guest Editors

Prof. Mihai Datcu

German Aerospace Center DLR, Germany

Email: mihai.datcu@dlr.de

Dr. Jacqueline Le Moigne

NASA Goddard Space Flight Center, USA

Email: jacqueline.j.lemoine-stewart@nasa.gov

Dr. Pierre Soille

European Commission Joint Research Centre JRC

Email: pierre.soille@jrc.ec.europa.eu

Pier Giorgio Marchetti

European Space Agency ESA

Email: pier.giorgio.marchetti@esa.int

Prof. Gui-Song Xia

Wuhan University, China

Email: guisong.xia@whu.edu.cn