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 aerial or 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 such as, 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
03/15/2018 1st round review due
04/15/2018 1st revision due
05/30/2018 2nd round review due
06/31/2018 2nd revision due
07/15/2018 Final due

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