



## CALL FOR PAPERS

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

#### Special Issue on “Remote Sensing Data Simulation”

Data simulation plays important roles in the development of remote sensing technology and its applications for understanding and managing our planet. Simulation is often used during development of an instrument concept and exploration of design tradeoffs. With the benefit of accurate knowledge of the ground truth, simulated data are often used to develop, train, or test both automated analysis algorithms and human analysts. Simulation is also used to hypothesize and compare with real observations, often in an iterative manner, as a tool for the retrieval and extraction of geoscience parameters. With the continued increase in low-cost computing power and further development of realistic forward models, there has been increased research activity in the generation and use of simulation tools in remote sensing.

This special issue of JSTARS will serve as a reference on the state-of-the-art in the development and use of simulation for remote sensing and will highlight the important role of data simulation in remote sensing research and development. Prospective authors are encouraged to document and share details of their simulation models and approaches. This special issue will also help to highlight gaps and unmet needs in simulation science.

The Guest Editors are Co-Chairs and inaugural members of the newly formed GRSS Technical Committee on Modeling in Remote Sensing (MIRS). The special issue is one of the initial activities of this Technical Committee (<http://www.grss-ieee.org/community/technical-committees/modeling-in-remote-sensing/>).

For this special issue we invite contributions of unpublished original research in the following domains:

- Simulation of all types of remote sensing data, e.g., multispectral, hyperspectral, microwave radiometry, synthetic aperture radar, scatterometry, lidar
- First-principles modeling for remotely sensed data simulation
- Verification and validation of models and simulated data
- High-speed computational implementations of simulation codes
- Engineering tools for remote sensing instrument design
- Applications of data simulation for remotely sensed data analysis

#### 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 “Remote Sensing Data Simulation” special issue manuscript type. Prospective authors should consult the site <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7416303> for guidelines and information on paper submission. Please note that IEEE JSTARS applies a mandatory page over length charge of \$200 per page (beginning with page 7 and beyond).

#### Schedule

November 15, 2016: Full paper submission deadline  
November 2017: Publication date

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