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

Special Issue on

“Advances in Remote Sensing of Nighttime Lights: Progresses, Challenges, and Perspectives”

Nighttime light (NTL) data provides unique observations of our Earth and receives increasing attentions from scholars of a variety of fields (e.g., remote sensing, GIS, and urban planning). Since 1990s, the Defense Meteorological Satellite Program - Operational Linescan System (DMSP-OLS) nighttime light data have been explored to monitor human activities (e.g., population, GDP, and urbanization). Recently, several new NTL satellites such as NPP-VIIRS, International Space Station (ISS), EROS-B, Jilin 1-3B, and Luojia 1-01A, with better spatial and temporal resolutions, and even multispectral information, have been launched. These new satellites can provide a greater amount of detailed artificial light records at night and could improve our understanding of how the city changes. In the meantime, the new NTL data also pose new scientific and technological challenges in calibration, interpretation, applications, and potential assessment.

This special issue aims to collect and highlight recent progresses, current challenges, and future opportunities in remote sensing of nighttime lights, especially in the following topics:

- Data preprocessing such as noise elimination, image enhancement, and geometric correction;
- Analyses of relationship between ground observations of artificial lights and space borne measurements of night time brightness;
- Applications of NTL remotely sensed data such as urbanization mapping, environmental analysis, events detection, and change analyses;
- Assessment of new remotely sensed NTL data potential, especially beyond transitional applications.

Schedule

November 1, 2019	Submission window opening
April 30, 2020	Submission window closing
2020	Publication Date

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 “Advances in Remote Sensing of Nighttime Lights: Progresses, Challenges, and Perspectives” special issue manuscript type. Prospective authors should consult the site <http://www.grss-ieee.org/publication-category/jstars/> for guidelines and information on paper submission. All submissions must be formatted using the IEEE standard format (double column, single spaced). For a template in this format please consult the site http://www.ieee.org/publications_standards/publications/authors/author_templates.html. As of January 1, 2020, J-STARS will become a fully open-access journal, charging a flat rate of \$1250 for each paper.

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