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

Special Issue on
“Application of remote sensing big data on urban climate and human settlement environment”

The worldwide trend of urbanization is irreversible along with the fast population and economic growth. There is no doubt that urbanization would play an important role in achieving a sustainable future for human societies. However, changes of land use structure and land surface characteristics, such as building materials, roof greening, and urban surface roughness, etc., associated with the population growth and urban sprawl can significantly influence the local, regional, and even global climate by altering the energy balance of the earth, this in turn can negatively affect the quality of human life. Given a global climate change, urban areas are experiencing more intense microclimate environmental changes including urban heat island effects. In-depth research on urban climate and human settlement environments is critical for alleviating the urban environmental problems and promoting sustainable development. The advent of remote sensing big data makes it possible to understand the relations between urban developments and climate change through multi-source and massive remote sensing data, such as the driving mechanisms of urban development on climate change and the impact of climate change on urban construction and urban environment. This can provide valuable insights for formulating scientific and rational urban planning strategies to avoid the possible market risk and negative environmental impacts of the accelerating urbanization.

This special issue aims to collect and highlight recent progresses, current challenges, and future opportunities in the application of remote sensing big data and methods on urban climate and human settlement environment, especially in the following topics:

- Newly developed sensor for monitoring urban climate and human settlements
- Newly constructed remote sensing index of urban surface characteristics
- Application of new remote sensing methods and technologies in urban climate and human settlement environment
- Remote sensing big data mining, deep learning for urban climate and human settlement environment

Schedule

May 1, 2021 Submission window opening
December 31, 2021 Submission window 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 “**Application of remote sensing big data on urban climate and human settlement environment**” special issue manuscript type. Prospective authors should consult the site <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9082768> 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 been a fully open-access journal charging a flat publication fee \$1,250 per paper.

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