



**CALL FOR PAPERS**  
**IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**  
**Special Issue on “Remote Sensing of Ecosystems”**

Climate change and human activity impact terrestrial, marine, and freshwater ecosystems globally, leading to changes in ecosystem patterns and processes as well as the functions and services. These transformations need to be observed and assessed accurately in order to better understand ecosystem dynamics and take efficient actions to manage these changes. Remote sensing is powerful for monitoring status and changes of ecosystem, involving several tasks like land cover and change detection, time-series ecological parameter retrieval, ecosystem services assessment, biodiversity estimation, etc. Recent advances in sensors on satellite, aircraft and UAV instruments provide a wide range of observational capability in terms of spatial, temporal and spectral resolutions. This particularly facilitates ecosystem monitoring and analyses cost-effectively over a large area or within a long time series. Along with the availability of various remote sensing datasets, machine learning approaches and computational capacity are improving quickly, offering huge potential for improved data analysis. Numerous new analytical approaches related to big data, artificial intelligent, spatio-temporal statistics and cloud computing have been utilized in remote sensing, allowing significant improvement in the modelling, mapping, and detection of ecosystem changes. This special issue aims to solicit innovative and integrative papers that describe the latest techniques and applications in remote sensing of ecosystems.

The broad topics include (not an exhaustive list):

- Land cover and change detection
- Ecological parameters and ecosystem functions
- Ecosystem service assessments
- Ecological effects assessment of national key projects
- Ecosystem observation instruments and platform
- Ecosystem ground observation network
- Big data for ecosystem
- Ecological cloud
- Remote sensing of biodiversity
- Remote sensing of forest ecosystem
- Remote sensing of grassland ecosystem
- Remote sensing of agricultural ecosystem
- Remote sensing of wetland ecosystem
- Remote sensing of urban ecosystem
- Remote sensing of desert ecosystem
- Remote sensing of marine ecosystem

The contributors of this special issue are mainly (but not exclusively) from the 1<sup>st</sup> Academic Symposium on Remote Sensing of Ecosystems, 25 - 28 Nov. 2021, Shenzhen, China. Website: <http://www.ecowatch2021.com/>

**Schedule**

11 Oct. 2021 Submission system opening  
28 Feb. 2022 Submission system 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 “**Remote Sensing of Ecosystems**” 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](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 become a fully open-access journal charging a flat publication fee \$1,250 per paper.

**Guest Editors**

Bingfang Wu Aerospace Information Research Institute, Chinese Academy of Sciences, China ([wubf@aircas.ac.cn](mailto:wubf@aircas.ac.cn))  
Jun Li Sun Yat-sen University, China ([lijun48@mail.sysu.edu.cn](mailto:lijun48@mail.sysu.edu.cn))  
Yuan Zeng Aerospace Information Research Institute, Chinese Academy of Sciences, China ([zengyuan@aircas.ac.cn](mailto:zengyuan@aircas.ac.cn))  
William Woodgate The University of Queensland, Australia ([w.woodgate@gmail.com](mailto:w.woodgate@gmail.com))