

Special Issue

Land Surface Temperature Retrieval Using Satellite Remote Sensing (2nd Edition)

Message from the Guest Editors

Land surface temperature (LST) is a good indicator of energy partitioning at the land surface–atmosphere boundary, and is sensitive to changing surface conditions. Satellite remote sensing provides opportunities to estimate global and continuous LSTs. The key challenges to retrieve LST using satellite remote sensing are the removal of the atmospheric attenuation, the decoupling between LST and land surface emissivity (LSE), and topography. Over the past four decades, dozens of LST retrieval algorithms have been developed and expanded from the traditional thermal infrared and hyperspectral infrared remote sensing to microwave remote sensing. Meanwhile, to fill the gaps in the derived LSTs, many scientists are devoted to the extension of LST retrievals under all-weather conditions.

Topics of interest for this Special Issue include but are not limited to:

- Decoupling between LST and LSE;
- LST estimation from satellite infrared and microwave measurements;
- Temporal and angular normalization of LSTs;
- LST validation;
- Correlation between LST and surface air temperature.

Guest Editors

Dr. Geng-Ming Jiang

Key Laboratory for Information Science of Electromagnetic Waves (MoE), Fudan University, Shanghai 200433, China

Dr. Bo-Hui Tang

1. Faculty of Land Resources Engineering, Kunming University of Science and Technology, Kunming 650093, China
2. State Key Lab of Resources and Environmental Information System, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China

Deadline for manuscript submissions

closed (3 June 2024)



Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



mdpi.com/si/177368

Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

[mdpi.com/journal/
atmosphere](https://mdpi.com/journal/atmosphere)





Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



[mdpi.com/journal/
atmosphere](https://mdpi.com/journal/atmosphere)



About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

Dr. Daniele Contini

Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.

Journal Rank:

CiteScore - Q2 (Environmental Science (miscellaneous))