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

Special Issue on "Remote Sensing Retrieval"

The rapid development and deployment of Earth observation (EO) systems makes it possible to acquire remote sensing (RS) data with different resolutions (e.g., low, medium, high resolution), from different platforms (e.g., satellite, aerial, drone), and from different sensor types (e.g., optical, SRA, LiDAR). This, in combination with daily or even more frequent revisit times, has led to massive amounts of data and the subsequent challenges in finding the information that we want due to the limitations of data processing techniques. The intelligent analysis and fast exploration of such volumes of data is critical for timely RS data processing and analysis. It especially represents a big challenge in the field of RS image processing.

To this end, numerous content-based image retrieval methods have been developed initially by using handcrafted low-level image features such as color, texture, and shape. Recently, deep learning has drawn extensive attraction in the literature, and has grown to be a research focus in image interpretation and recognition since it enables multi-level\scale representations of image content through the deep network structures. Unlike conventional content-based image retrieval methods, deep learning methods are able to perform automatic feature learning.

Despite the progress than has been made in content-based remote sensing image retrieval, there are still a number of interesting questions to be addressed, ranging from the design or learning of powerful and transferable feature representations, to user-friendly and scalable search and retrieval systems. The purpose of this Special Issue is to increase interdisciplinary interaction and collaboration in RS image retrieval among researchers working in computer vision, machine learning and remote sensing, and to develop a scalable and accurate RS image search and retrieval systems. In particular, now is a good point to reflect on the recent advances in deep-learning based RS image retrieval as well as to anticipate where the field is going.

The broad topics include (but are not limited to):
- content-based indexing, search and retrieval of RS data
- novel feature descriptors and similarity metrics dedicated to RS data
- metric learning for RS image similarity
- accurate and scalable RS image retrieval systems
- cross-modal retrieval for RS data
- hash-based retrieval methods for fast search of large-scale RS data
- large scale benchmark datasets for RS image retrieval
- applications of image retrieval in RS

Schedule
December 20, 2021   Submission system opening
July 31, 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 Retrieval**" 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 become a fully open-access journal charging a flat publication fee $1,250 per paper.

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