



CALL FOR PAPERS

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

Special Issue on “Intelligent Information Fusion of Multimodal Remote Sensing Data in Situational Awareness and Game Confrontation”

Situational awareness is an emerging and challenging research hotspot, which is crucial in many real-world scenarios, such as sea surface monitoring, urban security, and emergency rescue, intention prediction, etc. Building a comprehensive and accurate situational awareness system can enhance our understanding, potentials, and capabilities to the various practical environment conditions. However, currently designed systems in dynamic monitoring and resilient recovery cannot meet the application requirements well. More importantly, the ability in target recognition, detection, and tracking also remains limited, due to few samples and incomplete information. Moreover, there usually exist biases in the system's security state assessment and abnormal behavior prediction of targets in adversarial environments. These aforementioned factors inevitably lead to relatively weak capabilities to accurately describe the actual situation in situational awareness systems. An ever-growing number and type of remote sensing data from different platforms (e.g., UAV, airborne, satellite-borne) or from different sensors (e.g., optical, radar) or from different types (e.g., image, signal, video), enable the target properties towards completeness. As a result, fusing multimodal remote sensing data might be a feasible and effective solution to build a more accurate situational awareness system. By considering the potential adversary and defense techniques, the system will be further improved and perfected. For this purpose, we would like to develop such a special issue that aims at developing advanced intelligent information fusion of multimodal remote sensing data for more perfect situational awareness in certain specific circumstances.

The broad topics include (but are not limited to):

- Advanced machine learning algorithms for target recognition, detection, or tracking
- Intelligent information fusion models of multimodal remote sensing data
- Multimodal target track prediction
- Situational intelligent analysis and perception systems
- Fusion-based anomaly behaviors detection of key targets
- Game theory for multimodal information fusion in situational awareness
- Adversarial and defense sample generation
- Novel benchmark datasets for target (behavior) recognition, detection, or tracking

Schedule

Feb 1, 2023, Submission system opening

Jul 31, 2023, 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 “**Intelligent Information Fusion of Multimodal Remote Sensing Data in Situational Awareness and Game Confrontation**” 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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