

## *Sensors and Materials*

### **Special Issue on Multisource Sensors for Geographic Spatiotemporal Analysis and Social Sensing Technology**

#### Call for papers

In recent years, with the rapid development of wireless sensors, handheld smart terminal devices, information communication, Internet of Things (IoT) technologies, and internet and mobile communication networks, a large amount of spatiotemporal big data has been generated with individual labels and spatiotemporal semantic information, which can facilitate the prolonged and highly accurate tracking and observation of individuals' spatial movements. With the advent of the big data era, geospatial big data, comprehensively covering human activities and geographical environmental information, has surpassed the limitations of traditional purposeful sampling data in terms of data scope, spatiotemporal granularity, and information content. This transformative development has ushered in a new research paradigm for the comprehensive understanding of the human–environment relationship. Geospatial Intelligence (GeoAI), an interdisciplinary research field combining geographic spatial science and artificial intelligence, significantly enhances the capability for dynamic sensing, intelligent reasoning, and knowledge discovery of geographical phenomena and Earth science processes. Therefore, the rapid development of remote sensing sensors and information communication technology, along with the application of technologies such as intelligent sensors, remote sensing, artificial intelligence, social perception, and spatiotemporal big data in geographic information science, provides reliable methods and technological support for geographical research.

This special issue aims to elaborate on the research and applications of multisource sensor data, remote sensing technology, and geographic information technology in the analysis of spatiotemporal data and social perception. It focuses on theoretical and practical research related to natural resources, the ecological environment, climate change, and urban transportation at various scales, as well as dynamic monitoring and the investigation of changing trends in the spatiotemporal status, thus providing effective technical support for geospatial analysis and natural resource management.

#### **Scope:**

- Multisource sensors for geographic spatiotemporal analysis;
- Ecological environment monitoring/assessment based on sensor data;
- Urban traffic monitoring/perception based on sensor data;
- Application of multisource sensors in climatology;
- Application of multisource sensors in social sensing technology;
- Urban governance/assessment based on geographic spatiotemporal data;
- Monitoring and analysis of urban natural resources;
- Extraction/fusion methods for urban multisensor monitoring based on artificial intelligence technology;
- Integration and application of artificial intelligence technology and geospatial–temporal data technology;
- Technological methods and application services of intelligent surveying and mapping.

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