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Special Issue on

Advanced Big Data Analysis Technologies for Environmental Monitoring Data

CALL FOR PAPERS

Environmental protection departments receive a lot of data every day. For example, quality information of atmospheric, water, soil, ocean, and other environmental factors obtained by environmental monitoring departments, the discharge data of pollution sources obtained by environmental supervision departments, the data of social, economic, and environmental protection work obtained by environmental statistics, and the scientific research information obtained by environmental research and research. In addition, the environmental protection department has also exchanged a lot of information with many departments (such as meteorology, water conservancy, ocean, agriculture, forestry, fishery, energy, health, transportation, etc.), which provides environmental researchers with opportunities to understand, analyze, and study environmental issues. It also provides a basis for analyzing and understanding problems for environmental management and environmental decision-making.

Faced with the huge amount of information and the complex relationship between different data types, effective data analysis technologies that explore the relationship and mutual influence between data classes are highly expected. To present, although data analysis technologies such as data acquisition, statistical calculation, system simulation and parameter identification, stochastic process analysis, neural network analysis, intelligent self-learning and semi-self-learning, etc., achieve great success in the field of environmental monitoring, there are also many existing issues to be further addressed. For example, how to explore complementary information from multi-modality environmental monitoring data? How to extract both stable and discriminant features from environmental monitoring data? How to design fast classifiers to classify large-scale environmental monitoring data?

This Special Issue aims to collect high-quality original research and review articles that address the open technical problems and challenges concerning emerging big data analysis technologies.

Potential topics include but are not limited to the following:

- Data acquisition technologies for multi-modal environmental monitoring data analysis
- Novel stochastic process analysis for environmental monitoring data analysis
- Fast neural networks for environmental monitoring data analysis
- Complex relationship analysis between different environmental monitoring data types
- Intelligent self-learning and semi-self-learning for environmental monitoring data analysis
- Statistical calculation for environmental monitoring data
- Deep learning for environmental monitoring data analysis
- Stable feature selection for environmental monitoring data

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.hindawi.com/submit?specialIssue=119026.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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