CALL FOR PAPERS

Call for Special Issue Papers: **Programming Models and Algorithms for Big Data** **Deadline for Manuscript Submission: January 17, 2021**

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This special issue focuses on the recent advances in programming models and algorithms for big data applications. Efficient big data management is a grand vision of modern computing technologies as it ascribes the functionalities of millions of intelligent, interconnected devices that can intercommunicate and progressively control the world around us. Big data analytics is not a single computing paradigm; instead, it acts as an enabling computing technology for various industries such as smart cities, transportation, intelligent systems, energy management systems, health-care applications, and so on. Technically speaking, Electronic Health Records (EHR) and E-health applications are considered to be one of the potential examples of big data applications, which generates an enormous amount of data every second, when processed efficiently can control the entire functionality of the E-health services.

Internet of Things (IoT) is the key enabler of the big data, which collects and optimizes big data from IoT devices for various business and productivity-related processes. This trend has given the opportunity of using big data for integrated marketing and quality control industrial applications. Further, it also gives rise to interdisciplinary research streams such as cloud/fog/edge computing assisted big data analytics computing models. Thus, to cope with the increasing demand for big data innovations, data scientists around the world should start to focus on advanced programming models and algorithms for big data, which can quickly learn and automate the process of big data analytics in real-time data-intensive applications. Further, it should also assist in effective communication, prediction, and decision-making processes. Though the existing methods of big data analytics approaches may reasonably execute operations, the increasing work efficiency of the current technological applications drastically decreases the working abilities of the traditional big data programming models with the requirement to improved safety and security functionalities.

Disruptive technologies such as cloud computing, blockchain, distributed machine learning, artificial intelligence, and deep learning are almost applied across every application of the present-day computing systems, which tremendously generates huge amounts of data with diverse computing requirements. Exploring advanced programming models for big data is the only way through which these massive data can be handled the proper way. In this context, we make a call for this special issue to explore innovative programming models and algorithms for big data.

List of considered topics include, but are not limited to, the following:

- Energy-efficient programming and computing models for IoT related big data applications
- Advances in programming models and algorithms for big data open platforms
- Innovative programming models and algorithms for big data beyond Hadoop/Map Reduce
- Efficient big data programming models and algorithms for big data search
- Programming models and algorithms for big data visual analytics and applications
- Programming models for big data assisted link and graph mining
- Semantic-based big data-mining programming models and algorithms
- Privacy-preserving secure big data analytics and algorithmic models for data-intensive applications
- Algorithms and efficient programming models for multimedia big data analytics and management processes
- New and innovative computational models for big data
- High performance/ parallel computing assisted programming models for big data

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We also encourage submission of papers that have been published in conference proceedings, with the requirement that the authors have made significant extensions as compared to the already published version of the study.

Please read through our Information for Authors at www.liebertpub.com/big prior to submitting your research for consideration. Questions or pre-submission queries? Please contact Lead Guest Dr. Fadi Al-Turjman at fadi.alturjman@neu.edu.tr.

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