

Call for Papers

SPECIAL ISSUE on

Programming Models and Algorithms for Big Data

GUEST EDITORS

Prof. Dr. Fadi Al-Turjman, Faculty of Engineering, Near East University, Turkey

Dr. Shahid Mumtaz, Instituto de Telecomunicações Aveiro, Aveiro, Portugal

DESCRIPTION

This special issue in [Open Computer Science](#) 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 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, healthcare 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

Authors are requested to submit their full revised papers complying the general scope of the journal. The submitted papers will undergo the standard peer-review process before they can be accepted. Notification of acceptance will be communicated as we progress with the review process.

HOW TO SUBMIT

Before submission authors should carefully read the [Instruction for Authors](#), available online at:

https://www.degruyter.com/publication/journal_key/COMP/downloadAsset/COMP_Instruction%20for%20Authors.pdf

Manuscripts can be written in TeX, LaTeX (strongly recommended) - the journal's [LATEX template](#). Please note that we do not accept papers in Plain TEX format. Text files can be also submitted as standard DOCUMENT (.DOC) which is acceptable if the submission in LATEX is not possible. **For an initial submission, the authors are strongly advised to upload their entire manuscript, including tables and figures, as a single PDF file.**

All submissions to the Special Issue must be made electronically via online submission system Editorial Manager:

<http://www.editorialmanager.com/opencs/>

All manuscripts will undergo the standard peer-review process (single blind, at least two independent reviewers). **When entering your submission via online submission system please choose the option “Special Issue on Programming Models and Algorithms for Big Data”.**

Submission of a manuscript implies that the work described has not been published before and it is not under consideration for publication anywhere else.

The deadline for submissions is January 17, 2023, but individual papers will be reviewed and published online on an ongoing basis.

Contributors to the Special Issue will benefit from:

- critical peer-review
- no space constraints
- quick online publication upon completing the publishing process (**continuous publication model**)
- better visibility due to **Open Access** – free, unrestricted and permanent access to all the content
- **liberal policies on copyrights** (authors retain copyrights) and on self-archiving (no embargo periods)
- promotion of published papers to readers and citers
- **long-term preservation** – content archiving with Portico

We are looking forward to your submission!

In case of any questions please contact [Editorial Office \(opencomputerscience@degruyter.com\)](mailto:opencomputerscience@degruyter.com)