

Big Data Inspired Data Sensing, Processing and Networking Technologies

Big data is the current big thing in computing after cloud computing and it is in par with software defined network (SDN) in communications and networks field. It is evident that big data is making big impact to diverse walks of our everyday life, ranging from increasing understanding of digital system or human/social behaviours/processes to promoting economic growth and eventually to improving human being's health and quality of life. A long-term strategy to address various challenges introduced or inspired by big data shall be a systematic one that brings together the three key aspects of a big data system, namely, data sensing, data processing and data communications.

This Special Issue expects to address big data issues related to data sensing, data processing and data communications, including high-level ideology/methodology, concrete big data inspired data sensing/processing/networking technologies, big data system architecture, QoS, energy-efficiency, and fault tolerance in big data systems, management of big data systems, service engineering and algorithm design, and real-world deployment experiences. Paper can address any individual component in a big data system or an integration of them. It is at the author's disposal as to which particular technology to choose.

The goal of this SI is to highlight and systematically address the challenges arising from big data. The collection of the articles in this SI will create a forum for researches, developers and practitioners from both academia and industry to publish the key results and to disseminate the state-of-the-art concepts and techniques in all aspects of big data. This SI will also serve as a stimulus to educate about, promote and accelerate technological evolution toward big data. Specifically, the special issue will present original research articles that cover the following subjects (but are not limited to):

- Big data inspired data sensing technologies, modelling, algorithms and systems
- Big data inspired data processing technologies, modelling, algorithms and systems including image processing, computer vision
- Big data inspired data communication and networking technologies, modelling, algorithms including optical/MPLS core networks, IP core networks, fixed broadband access network technologies such as passive optical networks (PONs), mobile wireless broadband access technologies (such as WiFi, WiMAX, LTE, LTE-A, 5G, etc), and also the combination and/or convergence of the above
- Hybridization of the above three individual key aspects. e.g., convergence of data sensing with data pre-processing, cross-layer design of big data processing together with stream data transmission, etc
- Energy-efficient big data systems

- Quality of Service assurance in big data systems
- Fault tolerance in big data systems
- Big data system management and adaptation
- Application-layer service engineering for big data
- Testing and evaluation tools
- Prototype systems and real-world deployment experiences

Manuscript Submission

With regard to both the content and formatting style of the submissions, prospective contributors should follow the Elsevier Ad Hoc Networks guidelines for authors that can be found at <http://www.elsevier.com/journals/ad-hoc-networks/1570-8705/guide-for-authors>. Authors should submit their manuscripts through the online submission and editorial system for Ad Hoc Networks Journal at <http://ees.elsevier.com/adhoc/>. Choose "Special Issue – Big Data Inspired SPN" from the drop down menu on the submission page.

Important Date

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