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Call for Papers—Interfaces Special Issue: Applications of Analytics and Operations Research in Big Data Analysis

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Call for Papers

Interfaces Special Issue: Applications of Analytics
and Operations Research in Big Data Analysis

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The numbers and modalities of digital information sources being captured to monitor our traffic, weather, goods, manufacturing facilities, utilities, ports, health, and information technology infrastructure are growing at an incredible rate. Commercial and government organizations require the continuous analysis of this structured and unstructured data—transactions, sensor readings, text, audio, video, and images—to monitor, alert, learn from, and sometimes affect and control our surroundings. Doing this at scale has necessitated that we move away from traditional database store-and-process solutions to the emergence of the big data processing paradigm—with algorithms, systems, and applications designed to process data continuously and in a scalable, distributed manner. This includes the stream-processing paradigm for continuous analysis, and map-reduce (and similar) frameworks for scalable data processing.

Big data processing lies at the intersection of several diverse disciplines, including large-scale distributed systems, programming models, signal processing, data mining, machine learning, real-time algorithms, and user interfaces. Big data processing has also heavily leveraged analytics and operations research both at the business level for analyzing the data to enable better decisions, and at the systems level for making decisions about scheduling and optimization for scaling. In this special issue, we solicit papers that describe applications of big data processing systems and algorithms at the strategic, tactical, and operational levels of business processes.

Papers must belong to one or more of the following categories:

- An application of big data systems and analytics with a verification letter from the company or organization benefitting from the work;
- A novel literature review of analytics and operations research methods related to big data processing and distributed and continuous analysis;
- A tutorial emphasizing the emergence of novel big data processing systems, algorithms, and mathematical models for operations research.

Authors should review the *Interfaces* instructions on preparing a paper at <http://pubsonline.informs.org/page/inte/submission-guidelines>. Papers must be submitted online at the ScholarOne Manuscripts website: <http://mc.manuscriptcentral.com/inte>. In the Author Center of ScholarOne, please designate the “Manuscript Type” (#1—“Type, Title, and Abstract”) as “Special Issue” in the dropdown list; in #4—“Details and Comments,” respond “Operations Research in Big Data Analysis” to the question, “This paper is for which special issue?” All papers will be refereed.

Authors planning to write review articles and tutorials for this special issue should indicate their intent to the special issue editor by November 15, 2015. Articles must be received no later than February 15, 2016 for full consideration for publication in this special issue. Papers received after that date will be considered for publication in *Interfaces*, but will not be guaranteed consideration in the special issue.