

## Call for Papers: Big Data Analytics

*Special issue of the Journal of Theoretical and Applied Electronic Commerce Research*

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The *Journal of Theoretical and Applied Electronic Commerce Research* is planning a special issue on Big Data Analytics.

Big Data Analytics is a recent and rapidly evolving field in technology driven business world, and private and public organizations are eagerly waiting to collect the promised results. Empowered by advancement of information and communication technology, the volume and complexity of data are growing exponentially. Big Data is formed of large, diverse, complex, longitudinal, and distributed data sets generated from various instruments, sensors, Internet transactions, email, video, click streams, and other sources<sup>1</sup>. It is commonly characterized in three or more Vs: volume, velocity, variety, and additionally value, veracity etc. Big Data Analytics is characterized by the requirement of advanced data storage, management, analysis, and visualization technologies, which traditional business analytics is not able to offer<sup>2</sup>. These technologies include, among others: interfusion of various data sources, real-time analysis, online analytical processing, business performance management, data mining, machine learning, cloud computing, distributed processing, parallel algorithms, and parallel DBMS.

Big Data Analytics generates new opportunities for the benefit of our society, but it also introduces challenges<sup>3</sup>. Applications of Big Data Analytics are expected to change the world, how people and organizations are doing things in the future, as it provides increasing awareness and deeper insight on various real world and virtual phenomena<sup>4</sup>. It is to change business models, management and decision making processes in companies and public organizations, and to affect usage of resources in creating products and services.

Electronic commerce is one of the most promising and high impact application areas of Big Data Analytics<sup>2</sup>. It has already transformed markets when adopted by many leading electronic commerce vendors. Wide adoption of social media and crowdsourcing applications in various forms still offer new possibilities for collecting and analysing Big Data for supporting business, as well as unexplored opportunities for developing Big Data Analytics based information services for customers. Even if Big Data Analytics research is at its current stage significantly technology driven, focusing on such topics as data mining and cloud computing technologies<sup>2</sup>, there is an evident need for also understanding it better from the electronic commerce point of view.

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<sup>1</sup> National Science Foundation. (2012) Core Techniques and Technologies for Advancing Big Data Science & Engineering (BIGDATA), Program solicitation NSF 12-499. Available: <http://www.nsf.gov/pubs/2012/nsf12499/nsf12499.pdf>

<sup>2</sup> H. Chen, R. H. L. Chiang and V. C. Storey, Business Intelligence and Analytics: From Big Data to Big Impact. MIS Quarterly, vol. 36, no. 4, pp. 1165-1188, 2012.

<sup>3</sup> The White House. (2014) Big Data: Seizing Opportunities, Preserving Values. Available:

[http://www.whitehouse.gov/sites/default/files/docs/big\\_data\\_privacy\\_report\\_may\\_1\\_2014.pdf](http://www.whitehouse.gov/sites/default/files/docs/big_data_privacy_report_may_1_2014.pdf)

<sup>4</sup> P. C. Zikopoulos, C. Eaton, D. deRoos, T. Deutch and G. Lapis, Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data. McGraw-Hill, 2012.

## **Subject Coverage**

The objective of this Special Issue is to present the current state of research and practical experiences on Big Data Analytics from the viewpoint of electronic commerce research. The disciplines can cover any area of electronic commerce, including computer science, information technology, information systems, information management, telecommunications, business administration, law, social sciences, financial services, and other related fields. Particularly we like to see interdisciplinary papers presenting innovative applications and uses of Big Data Analytics in electronic commerce that are able to connect theory with practice. We are looking for experiences of successful Big Data Analytics applications as well as critical views and challenges. We encourage submitting papers that present genuine, rigorous research on electronic commerce in transit, which shows how Big Data Analytics is related with business practices, social, cultural and legal environments, personal privacy and security concerns, information systems, and emerging smart environments and device technologies.

Topics of interest include, but are not limited to, the following:

1. New opportunities in business environment
  - Changes of eCommerce in business and public sector services attributed to Big Data Analytics
  - Big Data Analytics based services innovation
  - Business models built on Big Data Analytics
  - Big Data Analytics in business ecosystems
  - Big Data Analytics with public and open data
  - Big Data Analytics and data markets
2. Big Data Analytics and strategy
  - Big Data Analytics strategies in eCommerce
  - Impact of Big Data Analytics in eCommerce strategies
  - Big Data Analytics in strategic decision making
3. Management of electronic commerce
  - Combining Big Data Analytics with eCommerce processes
  - Embedding Big Data Analytics in eCommerce practices
  - Application of Big Data Analytics methods and tools in eCommerce
  - Technological challenges of applying Big Data Analytics in eCommerce
  - Big Data fusion from different sources
4. Legal issues in applying Big Data Analytics
  - Privacy issues in Big Data Analytics
  - Applying Privacy by Design in eCommerce
  - Big Data Analytics and IPR
5. Research on Big Data Analytics in electronic commerce
  - Big Data Analytics research challenges
  - Research approaches to Big Data Analytics in eCommerce
  - Big Data Analytics based methods for eCommerce research

## **Notes for Intending Authors**

We are seeking original, innovative, and scientifically rigorous papers presenting practical experiences, methodological challenges, or impacts of Big Data Analytics from the viewpoint of electronic commerce. Especially empirical research, case studies or theory based qualitative and quantitative studies, are welcome.

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere.

Author guidelines can be found at [http://www.jtaer.com/author\\_guidelines.doc](http://www.jtaer.com/author_guidelines.doc). All submissions will be refereed by at least three reviewers. Submissions should be directed by email to [jtaer.big.data@utalca.cl](mailto:jtaer.big.data@utalca.cl).

For more information, please visit the following web site: <http://www.jtaer.com>.

### **Important dates**

- Full paper submission: March 30, 2015
- Notification of acceptance: June 15, 2015
- Revised submission: July 20, 2015
- Final acceptance notification: August 24, 2015
- Camera ready version of paper: September 21, 2015
- Publication: January – May, 2016

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