Preface to MoBiD 2014

Due to the enormous amount of data present and growing in the Web and other data sources such as sensors and social networks, there has been an increasing interest in incorporating this huge enormous of external and unstructured data, normally referred to "Big Data", into traditional applications. This necessity has made that traditional database systems and processing need to evolve and accommodate them to this new situation. We view that several key themes with the Big Data trend include (i) using a cloud for large-scale external and internal data; (ii) providing an easy-to-use but powerful services to access/manage/analyze the big data in the cloud; (iii) defining a problem-solving space and developing an architecture for a big data environment to conceptualize goals, tasks, and problem-solving methods to apply to domains; and (iv) managing big data and analyzing them to discover business values.

Therefore, this new era of cloud environment and Big Data requires conceptualization and methods to effectively manage big data and accomplish intended business goals. Thus, the objective of MoBiD'14 is to be an international forum for exchanging ideas on the latest and best proposals for modeling and managing big data in this new data-drive paradigm. Papers focusing on novel applications and using conceptual modeling approaches for any aspects of Big Data such as MapReduce, Hadoop and its ecosystems, Big Data Analytics, social networking, security and privacy, data science approaches, etc. are highly encouraged. The workshop will be a forum for researchers and practitioners who are interested in the different facets related to the use of the conceptual modeling approaches for the development of next generation applications based on Big Data.

The workshop has been announced in the main announcement venues in order to attract papers from 9 different countries distributed all over the world: France, Greece, India, Japan, Kenya, Korea, Spain, United Kingdom and USA. We have finally received 14 papers and the Program Committee have selected 6 papers, making an acceptance rate of 42%. We also have an invited keynote on Extracting Value from Big Data by Sudha Ram.

We would like to express our gratitude to the Program Committee members for their hard work in reviewing papers, the authors for submitting their papers, and the ER 2014 organizing committee for all their support.

July 2014

Il-Yeol Song
Juan Trujillo
David Gil
Carlos Blanco
Program Co-Chairs
MoBiD'14

Extracting Value from Big Data

Sudha Ram

Department of MIS
University of Arizona, Tucson
ram@eller.arizona.edu
www.insiteua.org

Abstract. The phenomenal growth of social media, mobile applications, sensor based technologies and the Internet of Things is generating a flood of "Big Data" and disrupting our world in many ways. This data is becoming strategically critical to enterprises of all sizes and types. Fueled by new technologies, companies are routinely generating upwards of 20 Petabytes of data each day – a petabye is one million gigabytes or approximately 6 billion digital photos or 20 million four-drawer filing cabinets filled with text.

In today's world, it is not enough for companies to track their sales, marketing, financial, and other internally generated data. They need to combine their internal data with external sources of data such as blogs and reviews about their products, Twitter and Facebook comments, as well as data from online discussion forums, to develop insights for improving performance and remaining competitive. The challenge here is to deal with a nonstop flood of data being generated at an increasing rate.

This talk will examine the paradigm shift caused by Big Data and focus on how to use "Data Science" to harness its power and create a smarter world. Much of the discussion on Big Data has centered around four "Vs" i.e. Volume, Velocity, Variety, and Veracity. This talk will delve deep into several other interesting and important characteristics to understand the nature of Big Data. These characteristics make it challenging to model and manage big data, yet, they provide the potential to unlock the value of Big Data. Using examples of research projects from the INSITE center (www.insiteua.org), we will examine how value can be extracted from Big Data by employing different analytical techniques. In particular, the focus will be on large scale network analysis and visualization techniques, to understand relationships among the various types of data and develop prediction models. Our examples will span a number of areas including, healthcare, online news propagation, and education. The talk will highlight promising directions for research using Big Data analytics.