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Juan Antonio Lossio-Ventura
Hugo Alatrasta-Salas (Eds.)

Information Management and Big Data

4th Annual International Symposium, SIMBig 2017
Lima, Peru, September 4–6, 2017
Revised Selected Papers

Editors

Juan Antonio Lossio-Ventura
University of Florida
Gainesville, FL
USA

Hugo Alatrasta-Salas
Universidad del Pacífico
Lima
Peru

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Preface

Today, data scientists use the term “big data” to describe the exponential growth and availability of data, which could be structured and unstructured. In this context, techniques used in data science must face a new challenge, which is to extract insights from a large amount of real-time and heterogeneous data (*e.g.*, video, audio, text, image).

Big data has taken place over the past 20 years. For instance, social networks such as Facebook, Twitter, and LinkedIn generate masses of data, which are available to be accessed by other applications. Several domains, including biomedicine, life sciences, and scientific research, have been affected by big data. Therefore there is a need to understand and exploit these data. This process is performed with data science, which is based on methodologies of data mining, natural language processing, Semantic Web, statistics, etc. This allows us to gain new insight through data-driven research. A major problem hampering big data analytics development is the need to process several types of data, such as structured, numeric, and unstructured data (*e.g.*, video, audio, text, image, etc.).

The Annual International Symposium on Information Management and Big Data seeks to present new methods in fields related to the data science for analyzing and managing large volumes of data. SIMBig aims to bring together main — national and international — actors in the field dealing with new technologies dedicated to handling a large amount of information. Moreover, the symposium is a convivial place where these actors present their scientific contributions in the form of full and short papers. This book offers extended versions of the best papers presented at SIMBig 2017¹. This fourth edition of SIMBig was held in Lima, Peru, during September 4–6. The proceedings are indexed in DBLP² [1] and as CEUR Workshop Proceedings³.

In this special edition, ten long papers were selected from 24 presented in the conference. SIMBig 2017 received 71 submissions.

SIMBig is positioning itself as one of the most important conferences in South America on issues related to information management and big data.

To share the new analysis methods for managing large volumes of data, we encouraged participation from researchers in all fields related to big data, data science, data mining, natural language processing, and the Semantic Web, but also multilingual text processing, and biomedical NLP.

Topics of interest of SIMBig included: data science, big data, data mining, natural language processing, bio-NLP, text mining, information retrieval, machine learning, the Semantic Web, ontologies, Web mining, knowledge representation and linked open data, social networks, social Web, and Web science, information visualization, OLAP,

¹ <http://simbig.org/SIMBig2017/>.

² <http://dblp1.uni-trier.de/db/conf/simbig/simbig2017.html>.

³ <http://ceur-ws.org/Vol-2029/>.

data warehousing, business intelligence, spatiotemporal data, health care, agent-based systems, reasoning and logic, constraints, satisfiability, and search.

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March 2018

Juan Antonio Lossio-Ventura
Hugo Alatrística-Salas

Reference

1. Juan Antonio Lossio-Ventura and Hugo Alatrística-Salas (eds.), Proceedings of the 4th Annual International Symposium on Information Management and Big Data, SIMBig 2017, Lima, Peru, September 4–6, 2017. CEUR Workshop Proceedings 2029, CEUR-WS.org 2017.

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¹ <http://www.up.edu.pe/>.

² <http://www.ufl.edu/>.

³ <http://www.uandina.edu.pe/>.

⁴ <http://www.springer.com/la/>.

⁵ <https://www.viabcp.com/wps/portal/>.

⁶ <http://posgrado.pucp.edu.pe/la-escuela/presentacion/>.

⁷ <http://www.icmc.usp.br/Portal/>.

⁸ <http://labic.icmc.usp.br/>.

⁹ <http://www2.ufscar.br/home/index.php>.

¹⁰ <http://www.unmsm.edu.pe/>.

¹¹ <http://inform.pucp.edu.pe/~grpiaa/>.



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