

Contents

Keynote

Toward Interactive User Data Analytics	3
<i>Siheem Amer-Yahia</i>	

Data Wrangling and Data Integration

A Conceptual Approach to Traffic Data Wrangling	9
<i>Mashaal Aljubairah, Sandra Sampaio, Hapsoro Adi Permana, and Pedro Sampaio</i>	
Integrating Online Data for Smart City Data Marts	23
<i>Michael Scriney, Martin F. O'Connor, and Mark Roantree</i>	
Towards Automatic Data Format Transformations: Data Wrangling at Scale	36
<i>Alex Bogatu, Norman W. Paton, and Alvaro A.A. Fernandes</i>	
Database Processes for Application Integration	49
<i>Daniel Ritter</i>	

Data Analysis and Data Mining

Preserving the Value of Large Scale Data Analytics over Time Through Selective Re-computation	65
<i>Paolo Missier, Jacek Cala, and Manisha Rathi</i>	
Statistical Data Analysis of Culture for Innovation Using an Open Data Set from the Australian Public Service	78
<i>Warit Wipulanusat, Kriengsak Panuwatwanich, and Rodney A. Stewart</i>	
Towards a Metaquery Language for Mining the Web of Data.	90
<i>Francesca A. Lisi</i>	
Enabling Deep Analytics in Stream Processing Systems.	94
<i>Milos Nikolic, Badrish Chandramouli, and Jonathan Goldstein</i>	

Graph Data Querying and Analysis

Link Prediction Using Top-k Shortest Distances	101
<i>Andrei Lebedev, JooYoung Lee, Victor Rivera, and Manuel Mazzara</i>	

Optimisation Techniques for Flexible Querying in SPARQL 1.1 106
Riccardo Frosini

Multidimensional Data and Data Quality

Taming Size and Cardinality of OLAP Data Cubes over Big Data 113
Alfredo Cuzzocrea, Rim Moussa, and Achref Laabidi

The Ontological Multidimensional Data Model in Quality Data
Specification and Extraction (Extended Abstract and Progress Report) 126
Leopoldo Bertossi and Mostafa Milani

Distributed and Multimedia Data Management

Closeness Constraints for Separation of Duties in Cloud Databases
as an Optimization Problem 133
Ferdinand Bollwein and Lena Wiese

WSN-DD: A Wireless Sensor Network Deployment Design Tool 146
David Santiago Bonilla Bonilla and Ixent Galpin

A Platform for Edge Computing Based on Raspberry Pi Clusters 153
Lorenzo Miori, Julian Sanin, and Sven Helmer

Effective Document Fingerprinting 160
Bettina Fazzinga, Sergio Flesca, Filippo Furfaro, and Elio Masciari

Author Index 165

Data Analytics

31st British International Conference on Databases,
BICOD 2017, London, UK, July 10-12, 2017, Proceedings

Calì, A.; Wood, P.; Martin, N.; Poullovassilis, A. (Eds.)

2017, XX, 165 p. 39 illus., Softcover

ISBN: 978-3-319-60794-8