

Contents

Invited Lectures

Streaming Methods in Data Analysis	3
<i>Graham Cormode</i>	

Data Integration

A Framework for Scalable Correlation of Spatio-temporal Event Data	9
<i>Stefan Hagedorn, Kai-Uwe Sattler, and Michael Gertz</i>	
Towards More Data-Aware Application Integration	16
<i>Daniel Ritter</i>	
Applying NoSQL Databases for Integrating Web Educational Stores - An Ontology-Based Approach	29
<i>Reem Qadan Al Fayez and Mike Joy</i>	
Implementing Peer-to-Peer Semantic Integration of Linked Data	41
<i>Mirko M. Dimartino, Andrea Calì, Alexandra Poulouvassilis, and Peter T. Wood</i>	

Graph Data

Virtual Network Mapping: A Graph Pattern Matching Approach.	49
<i>Yang Cao, Wenfei Fan, and Shuai Ma</i>	
A Fast Approach for Detecting Overlapping Communities in Social Networks Based on Game Theory	62
<i>Lihua Zhou, Peizhong Yang, Kevin Lü, Lizhen Wang, and Hongmei Chen</i>	
Consistent RDF Updates with Correct Dense <i>Deltas</i>	74
<i>Sana Al Azwari and John N. Wilson</i>	
Query-Oriented Summarization of RDF Graphs	87
<i>Šejla Čebirić, François Goasdoué, and Ioana Manolescu</i>	

Data Exploration

ReX: Extrapolating Relational Data in a Representative Way 95
*Teodora Sandra Buda, Thomas Cerqueus, John Murphy,
and Morten Kristiansen*

Evaluation Measures for Event Detection Techniques on Twitter Data
Streams 108
Andreas Weiler, Michael Grossniklaus, and Marc H. Scholl

A Framework for Selecting Deep Learning Hyper-parameters 120
Jim O’ Donoghue and Mark Roantree

Using Virtual Meeting Structure to Support Summarisation 133
Antonios G. Nanos, Anne E. James, Rahat Iqbal, and Yih-ling Hedley

NoSQL and Distributed Processing

NotaQL Is Not a Query Language! It’s for Data Transformation
on Wide-Column Stores. 139
Johannes Schildgen and Stefan Defloch

NoSQL Approach to Large Scale Analysis of Persisted Streams 152
Khalid Mahmood, Thanh Truong, and Tore Risch

Horizontal Fragmentation and Replication for Multiple Relaxation
Attributes. 157
Lena Wiese

Scalability

Scalable Queries Over Log Database Collections. 173
Minpeng Zhu, Khalid Mahmood, and Tore Risch

ECST – Extended Context-Free Straight-Line Tree Grammars 186
Stefan Böttcher, Rita Hartel, Thomas Jacobs, and Markus Jeromin

Configuring Spatial Grids for Efficient Main Memory Joins 199
Farhan Tauheed, Thomas Heinis, and Anastasia Ailamaki

Transactional and Incremental Type Inference from Data Updates. 206
Yu Liu and Peter McBrien

Author Index 221

Data Science

30th British International Conference on Databases,
BICOD 2015, Edinburgh, UK, July 6-8, 2015, Proceedings

Maneth, S. (Ed.)

2015, XX, 221 p. 84 illus., Softcover

ISBN: 978-3-319-20423-9