Contents

Second International DASFAA Workshop on Big Data Management and Analytics (BDMA)

Meme Media and Knowledge Federation for Exploratory Visual

Analytics of Big Data	3
Online Data Clustering Using Variational Learning of a Hierarchical Dirichlet Process Mixture of Dirichlet Distributions	18
Distributed Skyline Computation of Vertically Splitted Databases by Using MapReduce	33
Short-Term Speed Prediction on Urban Highways by Ensemble Learning with Feature Subset Selection	46
Graph Summarization Using Word Correlation Analysis on Large Set of Documents	61
Distributed K-Distance Indexing Approach for Efficient Shortest Path Discovery on Large Graphs	75
Customized Information Interface with Web Applications	89
Leveraging Enterprise Application Characteristics to Optimize Incremental Aggregate Maintenance in a Columnar In-Memory Database	102
MaiterStore: A Hot-Aware, High-Performance Key-Value Store for Graph Processing	117
Vertical Bit-Packing: Optimizing Operations on Bit-Packed Vectors Leveraging SIMD Instructions	132

Efficient Streaming Detection of Hidden Clusters in Big Data Using Subspace Stream Clustering	146
A Comparison of Systems to Large-Scale Data Access	161
Third International Workshop on Data Management for Emerging Network Infrastructure (DaMEN)	
A Framework to Measure Storage Utilization in Cloud Storage Systems Xiao Zhang, Wan Guo, Zhanhuai Li, Xiaonan Zhao, and Xiao Qin	179
Personalized Recommendation via Relevance Propagation on Social Tagging Graph	192
Optimizing Pipelined Execution for Distributed In-Memory OLAP System Li Wang, Lei Zhang, Chengcheng Yu, and Aoying Zhou	204
Hash ^{ed} -Join: Approximate String Similarity Join with Hashing	217
Minimizing Explanations of Why-Not Questions	230
HadoopM: A Message-Enabled Data Processing System on Large Clusters Wei Pan, Zhanhuai Li, Bo Suo, and Zhuo Wang	243
AntiqueData: A Proxy to Maintain Computational Transparency in Cloud Himel Dev, Mohammed Eunus Ali, Tanmoy Sen, and Madhusudan Basak	256
Third International Workshop on Spatial Information Modeling, Management and Mining (SIM ³)	
Monitoring Query Processing in Mobile Robot Databases	271
Efficiently Evaluating Range-Constrained Spatial Keyword Query on Road Networks	283
A Spatial-Temporal Analysis of Users' Geographical Patterns in Social Media: A Case Study on Microblogs	296

Contents	XXI
Solving Multiple Bichromatic Mutual Nearest Neighbor Queries with the GPU	308
A Kernel Density Method for Aggregating Boundary Collision Data into Areal Units	317
Integrated Indoor Positioning with Mobile Devices for Location-Based Service Applications	329
A Hybrid Scale-Out Cloud-Based Data Service for Worldwide Sensors Tania Khalafbeigi, Chih-Yuan Huang, Steve Liang, and Mea Wang	342
DASFAA Workshop on Uncertain and Crowdsourced Data (UnCrowd)	
Uncertainty in Crowd Data Sourcing Under Structural Constraints Antoine Amarilli, Yael Amsterdamer, and Tova Milo	351
Integration of Web Sources Under Uncertainty and Dependencies Using Probabilistic XML	36 0
Skill Ontology-Based Model for Quality Assurance in Crowdsourcing Kinda El Maarry, Wolf-Tilo Balke, Hyunsouk Cho, Seung-won Hwang, and Yukino Baba	376
ProbKS: Keyword Search on Probabilistic Spatial Data	388
Towards Mobile Sensor-Aware Crowdsourcing: Architecture, Opportunities and Challenges	403
Conditioning Probabilistic Relational Data with Referential Constraints Ruiming Tang, Dongxu Shao, M. Lamine Ba, and Huayu Wu	413
Author Index	429