# Preface

Sampling-Based Partitioning in MapReduce for Skewed Data

Yujie Xu, Peng Zou, Wenyu Qu, Zhiyang Li, Keqiu Li, and Xiaoli Cui

WaxElephant: A Realistic Hadoop Simulator for Parameters Tuning and Scalability Analysis

Zujie Ren, Zhijun Liu, Xianghua Xu, Jian Wan, Weisong Shi, and Min Zhou

A Dispatching-Rule-Based Task Scheduling Policy for MapReduce with Multi-type Jobs in Heterogeneous Environments

Xiang Gao, Qing Chen, Yurong Chen, Qingwei Sun, Yan Liu, and Mingzhu Li

Inverted Grid-Based kNN Query Processing with MapReduce

Changqing Ji, Tingting Dong, Yu Li, Yanming Shen, Keqiu Li, Wenming Qiu, Wenyu Qu, and Minyi Guo

Multiple DAGs Scheduling Based on Lowest Transportation and Completion Time Algorithm on the Cloud

Feng Ling Ren and Jiong Yu

A Heuristic Algorithm for Scheduling on Grid Computing Environment

Jing Wang, Gongqing Wu, Bin Zhang, and Xuegang Hu

Energy-Aware Genetic Algorithms for Task Scheduling in Cloud Computing

Ying Changtian and Yu Jiong

A Parameter Dynamic-Tuning Scheduling Algorithm Based on History in Heterogeneous Environments

Xu Zhao, Xiaoshe Dong, Haijun Cao, Yuanquan Fan, and Huo Zhu

Security SLAs for IMS-based Cloud Services

Guo Zhien and Dai Yiqi
Load Balancing Routing for Wireless Sensor Network in 2D Mesh .................................................................61
Yipiao Chen, Yi Yang, Yubo Deng, and Lian Li

Extracting Domain-Relevant Term Using Wikipedia Based on Random Walk Model ........................................68
Wenjuan Wu, Tao Liu, He Hu, and Xiaoyong Du

Ontology Based Data Conversion from Spreadsheet to OWL ............................................................................76
Xiaohui Zhang, Ruihua Di, and Xiaochen Feng

EasyDeploy: Automatic Application Deployment in Virtual Clusters ............................................................80
Tao Gao, Yanjun Xu, Xiaoying Wang, Jinlei Jiang, and Yongwei Wu

Integrating Heterogeneous Grid Middleware to Support Large-Scale Bag-of-Tasks
Applications ........................................................................................................................................87
Zhili Zhao, Lian Li, Ruisheng Zhang, Adrian Paschke, and Jiazao Lin

A Consistent Backup Mechanism for Disaster Recovery that Using Container Based
Virtualization ...............................................................................................................................................95
Yida Xu, Hongliang Yu, and Weimin Zheng

Translating Chemical Scripting Languages to Unified Job-Description Language
on Chemical-Grid ........................................................................................................................................101
Min Zhang, Ruisheng Zhang, Jiajun Xie, Shuping Li, Rongjing Hu, Jingfei Hou,
and Shuyi Zhang

Construct SaaS Applications from Multi-abstract-level: Method and System ................................................107
Lei Wu, Ying Pan, Shijun Liu, and Qian Li

An Improved Web Service Recommendation and Consumption Approach ................................................115
Yueming Zhu, Ruisheng Zhang, Rongjing Hu, Zhili Zhao, Jiazao Lin, and Shuyi Zhang

Behavioral Compatibility Analysis for Context-independent Service Substitution ........................................121
Jun Jin, Jingjing Hu, Yuanda Cao, and Jingxia Wang

Web Service to Deliver Filtered RSS Items to a Mobile Application .................................................................128
Atul Sajjanhar and Ying Zhao

Improving the Effective IO Throughput by Adaptive Read-Ahead Strategy for Private
Cloud Storage Service ..................................................................................................................................134
Qiuping Wang, Kang Chen, Yongwei Wu, and Weimin Zheng

A Hadoop-based Massive Molecular Data Storage Solution for Virtual Screening ......................................142
Yan Zhang, Ruisheng Zhang, Qiuqiang Chen, Xiaopan Gao, Rongjing Hu, Ying Zhang,
and Guangcai Liu

An Efficient Massive Data Processing Model in the Cloud—A Preliminary Report .........................................148
Guigang Zhang, Chao Li, Yong Zhang, Chunxiao Xing, and Jijiang Yang

Improving the System Capacity by Client Cooperation in Distributed File Service ......................................156
Gang Huang, Kang Chen, Yongwei Wu, Weimin Zheng, and Qiang Yue

Applying Multi-cell MD Method to Shared-Memory Multi-core Systems ......................................................164
Myongchan Kim, Shucai Yao, and Gwangsu Go