

# **2014 International Conference on Cloud Computing and Big Data**

## **(CCBD 2014)**

**Wuhan, China**  
**12-14 November 2014**



**IEEE Catalog Number:** CFP1427Z-POD  
**ISBN:** 978-1-4799-6622-6

# **2014 International Conference on Cloud Computing and Big Data**

## **CCBD 2014**

### **Table of Contents**

<b>Message from General Chairs.....</b>	viii
<b>Message from Program Chairs.....</b>	ix
<b>Conference Organization.....</b>	x
<b>Program Committee.....</b>	xii
<b>Reviewers.....</b>	xiii

---

### **Architecture & Foundations of Cloud Computing and Big Data**

Agentless Processes Monitoring Architecture on Cloud Platform .....	1
<i>Jingsong Cui, Hao Xiang, Chi Guo, and Kun Hou</i>	
Latest Progress and Infrastructure Innovations of Big Data Technology .....	8
<i>Shangyi Chen, Wei Li, Min Li, Xiaofei Zhang, and Yue Min</i>	
Multi-path Data Prefetching in Mobile Cloud Storage .....	16
<i>Lin Han, Hao Huang, and Chang-Sheng Xie</i>	

### **Knowledge Discovery in Cloud Computing and Big Data**

Characterized by Subjective Clues on Subjective Text Recognition .....	20
<i>Yonghua Liu, Aiping Li, Liguo Duan, and Hongxiang Wang</i>	
Classification on ADHD with Deep Learning .....	27
<i>Deping Kuang and Lianghua He</i>	
A Multi-objective Cluster Algorithm Based on GEP .....	33
<i>Youcong Ni, Xin Du, Datong Xie, Peng Ye, and Kaihuo Zhang</i>	
Distributed Relation Discovery in Internet of Things .....	39
<i>Weiping Zhu, Hongliang Lu, and Xiaohui Cui</i>	

## **Social Network and Graph Mining in Cloud Computing and Big Data I**

A Novel Clustering Algorithm on Large-Scale Graph Data .....	47
<i>Hao Zhang, Wei Zhou, Xiaoyu Wan, Ge Fu, Zhiyong Xu, and Jizhong Han</i>	
ADHD Discrimination Based on Social Network .....	55
<i>Xiaojiao Guo and Lianghua He</i>	
BUTTER: An Approach to Bug Triage with Topic Modeling and Heterogeneous Network Analysis .....	62
<i>Wen Zhang, Guanghe Han, and Qing Wang</i>	
A Comparison Study of Graph Data Processing Based on MyBSP and MapReduce .....	70
<i>Chao Liu, Hong Yao, Zhengwang Tang, Deze Zeng, Chengyu Hu, and Qingzhong Liang</i>	

## **Query & Optimization Algorithms for Cloud Services**

Adaptable Service Composition for Intelligent Logistics: A Middleware Approach .....	75
<i>Rong Yang, Bing Li, and Can Cheng</i>	
Queueing Theory Based Service Replica Strategy for Business Process Efficiency Optimization in Community Cloud .....	83
<i>Haoyu Luo, Xiao Liu, and Jin Liu</i>	
A Real-Time Distributed Query Solution Based on the OPC .....	91
<i>Zhi Yang, Kezhen Ju, Chunping Zhang, Mu Hu, and Feng Lin</i>	
Parallel Dynamic Skyline Query Using MapReduce .....	95
<i>Yuanyuan Li, Wenyu Qu, Zhiyang Li, Yujie Xu, Changqing Ji, and Junfeng Wu</i>	

## **Security, Privacy & Reliability in Cloud Computing and Big Data**

SFDS: A Security and Flexible Data Sharing Scheme in Cloud Environment .....	101
<i>Dongliang Lei, Ke Zhou, Hao Jin, Junping Liu, and Ronglei Wei</i>	
SDPMN: Privacy Preserving MapReduce Network Using SDN .....	109
<i>He Li and Hai Jin</i>	
Signal Singularity Detection Based on the Hermitian Wavelet for Fault Diagnosis .....	116
<i>Jian Chen, Wen Li, Qingdong Li, Peng Li, Chengbin Lian, and Zhang Ren</i>	
Multi-user Searchable Encryption with Coarser-Grained Access Control without Key Sharing .....	119
<i>Qinqin Wang, Yanqin Zhu, and Xizhao Luo</i>	

## **Management and Applications in Cloud Computing and Big Data**

Research on Warship Communication Operation and Maintenance	
Management Based on Big Data .....	126
<i>Da Ning, Peng Chen, Gang Yuan, Jianlin Xu, and Lin Xu</i>	
The Industry Data Analysis Processing Model Design: The Regional Health	
Disease Trend Analysis Model .....	130
<i>Li Anying, Chen Ke, Song He, and Lei Yu</i>	
A Computing Model for Real-Time Stream Processing .....	134
<i>Li Zhao, Zhang Chuang, Xu Ke-Fu, and Chen Meng-Meng</i>	

## **Social Network and Graph Mining in Cloud Computing and Big Data II**

Online Shopping Preference Analysis of Campus Network Users Based	
on MapReduce .....	138
<i>Yang Junchao, Luo Jiangtao, Shen Jian, and Deng Shengxiong</i>	
Discovering Most Influential Social Networks Nodes Based on Floating	
Influence .....	144
<i>Wei Zeng, Chuan Li, Bingqing Feng, Ning Yang, and Qian Luo</i>	
Index-Based OLAP Aggregation for In-Memory Cluster Computing .....	148
<i>Yu Wang and Xiaojun Ye</i>	
Reusing Service Process Fragments with a Linguistic Approach for User	
Qualitative Preferences .....	152
<i>Rong Yang and Bing Li</i>	

## **Dynamic Issues in Cloud Computing and Big Data**

A Task Scheduling Approach for Real-Time Stream Processing .....	160
<i>Chen Meng-Meng, Zhuang Chuang, Li Zhao, and Xu Ke-Fu</i>	
A Research on High-Performance SDN Controller .....	168
<i>Feng Wang, Heyu Wang, Baohua Lei, and Wenting Ma</i>	
Understanding the SWD-based RAID System .....	175
<i>Wenguo Liu, Dan Feng, Lingfang Zeng, and Jianxi Chen</i>	
DT-GC: Adaptive Garbage Collection with Dynamic Thresholds for SSDs .....	182
<i>Yi Qin, Dan Feng, Jingning Liu, Wei Tong, and Zhiming Zhu</i>	
<b>Author Index .....</b>	<b>189</b>