

2012 Second International Conference on Cloud and Green Computing

(CGC 2012)

**Xiangtan, Hunan, China
1 – 3 November 2012**



**IEEE Catalog Number: CFP1280T-PRT
ISBN: 978-1-4673-3027-5**

2012 Second International Conference on Cloud and Green Computing

CGC 2012

Table of Contents

Message from the CGC2012 Chairs	xiv
CGC2012 Organizing and Program Committees.....	xv
Message from the SCA2012 Chairs	xx
SCA2012 Organizing and Program Committees.....	xxi
Message from the WMSC2012 Workshop Chairs.....	xxv
WMSC2012 Organizing and Program Committees.....	xxvi
Message from the PriSecCSN2012 Workshop Chairs.....	xxvii
PriSecCSN2012 Organizing and Program Committees.....	xxviii
Message from the BigDataMR2012 Workshop Chairs.....	xxix
BigDataMR2012 Organizing and Program Committees.....	xxx
Message from the SNAIDM2012 Workshop Chairs.....	xxxi
SNAIDM2012 Organizing and Program Committees.....	xxxii
Message from the WW2012 Workshop Chairs.....	xxxiii
WW2012 Organizing and Program Committees.....	xxxiv
Message from the SNSDB2012 Workshop Chairs.....	xxxv
SNSDB2012 Organizing and Program Committees.....	xxxvi

The Second International Conference on Cloud and Green Computing (CGC2012)

An Energy Model for Applications Running on Multicore Systems	1
<i>Delbert Bonner and Akbar Siami Namin</i>	
An Ad-hoc Distributed Reasoning Scheme for Content Centric Networking	9
<i>Aiping Yi, Junnian Wang, and Zhuhua Liao</i>	
A General Approach to Service Deployment in Cloud Environments	17
<i>Wubin Li, Petter Svärd, Johan Tordsson, and Erik Elmroth</i>	
Implementing Smith-Waterman Algorithm with Two-Dimensional Cache on GPUs	25
<i>Xiaowen Feng, Hai Jin, Ran Zheng, Zhiyuan Shao, and Lei Zhu</i>	
Optimizing Xen Hypervisor by Using Lock-Aware Scheduling	31
<i>Alin Zhong, Hai Jin, Song Wu, Xuanhua Shi, and Wei Gen</i>	

Configuration and Optimization of Virtual Business in Cloud Computing Environment	39
<i>Hongjun Sun, Shuangxi Huang, Yushun Fan, and Wei Su</i>	
Key Research Issues for Privacy Protection and Preservation in Cloud Computing	47
<i>Gaofeng Zhang, Yun Yang, Xuyun Zhang, Chang Liu, and Jinjun Chen</i>	
An Approach to History Based Automatic Service Composition	55
<i>Xinyu Zeng, Xinhuai Tang, and Delai Chen</i>	
Dynamic Grouping Strategy in Cloud Computing	59
<i>Qin Liu, Yuhong Guo, Jie Wu, and Guojun Wang</i>	
Recommending Pick-up Points for Taxi-drivers Based on Spatio-temporal Clustering	67
<i>Mingyue Zhang, Jianxun Liu, Yizhi Liu, Zhenyang Hu, and Liang Yi</i>	
SEJ: An Even Approach to Multiway Theta-Joins Using MapReduce	73
<i>Changchun Zhang, Jing Li, Lei Wu, Meiyang Lin, and Weiqing Liu</i>	
Multi-attribute Combinatorial Marketplaces for Cloud Resource Trading	81
<i>Ahmed Salim Alrawahi and Kevin Lee</i>	
A QoS-Aware Service Optimization Method Based on History Records and Clustering	89
<i>Meng Shunmei, Liu Zhenxing, and Dou Wanchun</i>	
Scientific-Workflow-Management-as-a-Service in the Cloud	97
<i>Yong Zhao, Youfu Li, Wenhong Tian, and Ruini Xue</i>	
Spot-on for Timed instances: Striking a Balance between Spot and On-demand Instances	105
<i>Thomas Knauth and Christof Fetzer</i>	
Data Sharing in Data-Centric Multi-tenant Software as a Service	113
<i>Usman Aslam and Hamid Mukhtar</i>	
Vertical Scaling for Prioritized VMs Provisioning	118
<i>Lenar Yazdanov and Christof Fetzer</i>	
Memcache and MongoDB Based GIS Web Service	126
<i>Jinghong Yang, Wuyang Ping, Lin Liu, and Qiping Hu</i>	
Towards Privacy Preserving Mining over Distributed Cloud Databases	130
<i>Ayad Ibrahim, Hai Jin, Ali A. Yassin, and Deqing Zou</i>	
Risk-Aware Checkpoint Selection in Cloud-Based Scientific Workflow	137
<i>Mingzhong Wang, Liehuang Zhu, and Jinjun Chen</i>	
Symbiotic Scheduling for Virtual Machines on SMT Processors	145
<i>Kefeng Deng, Kaijun Ren, and Junqiang Song</i>	
A Monitoring Mechanism for Storage Clouds	153
<i>Spyridon V. Gogouvitis, Vassileios Alexandrou, Nikoletta Mavrogeorgi, Stefanos Koutsoutos, Dimosthenis Kyriazis, and Theodora Varvarigou</i>	
Social Networking for Sharing Cloud Resources	160
<i>Zahra Ali, Raihan Ur Rasool, and Peter Bloodsworth</i>	

Elastic JADE: Dynamically Scalable Multi Agents Using Cloud Resources	167
<i>Umar Siddiqui, Ghalib Ahmed Tahir, Attiq Ur Rehman, Zahra Ali, Raihan Ur Rasool, and Peter Bloodsworth</i>	
Re-encryption Optimization in CP-ABE Based Cryptographic Cloud Storage	173
<i>Yong Cheng, Jiangchun Ren, Zhiying Wang, Songzhu Mei, and Jie Zhou</i>	
Attributes Union in CP-ABE Algorithm for Large Universe Cryptographic Access Control	180
<i>Yong Cheng, Jiangchun Ren, Zhiying Wang, Songzhu Mei, and Jie Zhou</i>	
Preprocessing Scheme of Intelligent Assembly for a High Performance VLIW DSP	187
<i>Yonghua Hu, Shuming Chen, and Jie Huang</i>	
Energy Efficient Computing through Productivity-Aware Frequency Scaling	191
<i>Lesandro Ponciano, Andrey Brito, Livia Sampaio, and Francisco Brasileiro</i>	
CompatibleOne: Designing an Energy Efficient Open Source Cloud Broker	199
<i>Julien Carpentier, Jean-Patrick Gelas, Laurent Lefèvre, Maxime Morel, Olivier Mornard, and Jean-Pierre Laisné</i>	
A Multi-step-ahead CPU Load Prediction Approach in Distributed System	206
<i>Dingyu Yang, Jian Cao, Cheng Yu, and Jing Xiao</i>	
E-health Framework Based on Autonomic Cloud Computing	214
<i>Goran Martinovic and Bruno Zoric</i>	
A QoS-aware Dynamic Data Replica Deletion Strategy for Distributed Storage Systems under Cloud Computing Environments	219
<i>Bin Liao, Jiong Yu, Hua Sun, and Mei Nian</i>	
Parallel Text Clustering Based on MapReduce	226
<i>Cao Zewen and Zhou Yao</i>	
Research on Code Migration Framework for Mobile Computing	230
<i>Long Cheng, Hongming Cai, and Lihong Jiang</i>	
Rules and Implementation for Generating Ontology from Relational Database	237
<i>Yutao Ren, Lihong Jiang, Fenglin Bu, and Hongming Cai</i>	
The Parallel Algorithm of the Non-differentiable Maximum Likelihood Ensemble Filter on Cloud Environments	245
<i>Wangyi Han, Junqiang Song, and Xiaoqun Cao</i>	
An Efficient Scheme for Minimum-Latency Data Aggregation in Two- and Three-Dimensional Wireless Sensor Networks	252
<i>Hongju Cheng, Feifei Li, Laurence T. Yang, and Naixue Xiong</i>	
Green Queue: Customized Large-Scale Clock Frequency Scaling	260
<i>Ananta Tiwari, Michael Laurenzano, Joshua Peraza, Laura Carrington, and Allan Snaveley</i>	
A Proactive Fault Tolerance Approach to High Performance Computing (HPC) in the Cloud	268
<i>Ifeanyi P. Egwutuoha, Shiping Chen, David Levy, Bran Selic, and Rafael Calvo</i>	

Energy Footprint of Advanced Dense Numerical Linear Algebra Using Tile Algorithms on Multicore Architectures	274
<i>Jack Dongarra, Hatem Ltaief, Piotr Luszczek, and Vincent M. Weaver</i>	
Anonymous Password Authentication Scheme by Using Digital Signature and Fingerprint in Cloud Computing	282
<i>Ali A. Yassin, Hai Jin, Ayad Ibrahim, and Deqing Zou</i>	
A Service Provisioning Strategy Based on SPEA2 for SaaS Applications in Cloud	290
<i>Tiantian Zhang, Yuliang Shi, Meng Xu, and Lizhen Cui</i>	
Reducing the Number of Miscreant Tasks Executions in a Multi-use Cluster	296
<i>A. Stephen McGough, Matthew Forshaw, Clive Gerrard, and Stuart Wheeler</i>	
Privacy-Preserving Layer over MapReduce on Cloud	304
<i>Xuyun Zhang, Chang Liu, Surya Nepal, Wanchun Dou, and Jinjun Chen</i>	
Minimizing the Energy Cost of Servers in Data Center Networks	311
<i>Jun Wu, Qin Jia, Jin Zhao, and Xin Wang</i>	
Trust Evaluation Model against Insider Attack in Wireless Sensor Networks	319
<i>Yifan Lu, Kai Lin, and Keqiu Li</i>	
Study on Anti-Attack Model for Low-Latency Anonymous Communication System	327
<i>Sun Dongbin, Liu Wu, Sun Donghong, and Ren Ping</i>	
A System for Parallel Data Mining Service on Cloud	329
<i>Tao Chen, Jidong Chen, and Baoyao Zhou</i>	
 The Second International Conference on Social Computing and Its Applications (SCA2012)	
Academic Recommendation on Graph with Dynamic Transfer Chain	331
<i>Jia Zhou, Tiejian Luo, and Guandong Xu</i>	
Determining the Number of Clusters in Co-authorship Networks Using Social Network Theory	337
<i>Qinxue Meng and Paul J. Kennedy</i>	
Efficient Structural Query Evaluation over Social Data	344
<i>Chaoyong Wang, Xueqing Gong, and Xiaoling Wang</i>	
Real-Time Search over a Microblogging System	352
<i>Ming Gao, Cheqing Jin, Weining Qian, and Xueqing Gong</i>	
AUTrust: A Practical Trust Measurement for Adjacent Users in Social Networks	360
<i>Guangyu Yin, Fan Jiang, Shaoyin Cheng, Xiang Li, and Xing He</i>	
A Visual Exploratory Search Engine Solution Based on Cloud Computing	368
<i>Jiyu Tang, Xinhuai Tang, and Delai Chen</i>	
Web Service Ranking Based on Context	375
<i>Rong Zhang, Koji Zettsu, Yutaka Kidawara, and Yasushi Kiyoki</i>	

Discovering Communities with Self-Adaptive k Clustering in Microblog Data	383
<i>Huang Ting, Dunlu Peng, and Lidong Cao</i>	
Negative Effects of Incentivised Viral Campaigns for Activity in Social Networks	391
<i>Radoslaw Michalski, Jaroslaw Jankowski, and Przemyslaw Kazienko</i>	
Group Division for Recommendation in Tag-Based Systems	399
<i>Rong Pan, Guandong Xu, Peter Dolog, and Yu Zong</i>	
Web Page Recognition Algorithm Based on Link Analysis in Theme Search Engine	405
<i>Zude Chen, Jianxun Liu, Haijun Zhai, Lei Jiang, and Buqing Cao</i>	
ASML: Artificial Society Modelling Language for ACP Approach Based on Organization Metaphors	410
<i>Mingsheng Tang, Xinjun Mao, Huiping Zhou, and Xueyan Tan</i>	
Applying Centrality Measures to the Behavior Analysis of Developers in Open Source Software Community	418
<i>Peng He, Bing Li, and Yuan Huang</i>	
Foundations of Trust: Contextualising Trust in Social Clouds	424
<i>Simon Caton, Christoph Dukat, Tilo Grenz, Christian Haas, Michaela Pfadenhauer, and Christof Weinhardt</i>	
Microblogging Sentiment Analysis Using Emotional Vector	430
<i>Lumin Zhang, Yan Jia, Bin Zhou, and Yi Han</i>	
Using Social Intelligence for New Event Detection in Microblog Stream	434
<i>Lei Deng, Zhaoyun Ding, Bingying Xu, Bin Zhou, and Peng Zou</i>	
A Practical Method for Detecting Community Structures in Decentralized and Unstructured P2P Networks	440
<i>Meng Liu, Zhenxing Liu, and Wanchun Dou</i>	
A Ranked-Based Learning Approach to Automated Essay Scoring	448
<i>Hongbo Chen, Ben He, Tiejian Luo, and Baobin Li</i>	
A Method for Extracting Influential Nodes while Considering the Development of Social Networks	456
<i>Masaki Oono</i>	
Forum Data Extraction without Explicit Rules	460
<i>Jingwei Zhang, Cheqing Jin, Yuming Lin, and Xueqing Gong</i>	
MobiMsg: A Resource-Efficient Location-Based Mobile Instant Messaging System	466
<i>Sheng Zhao, Feng Xia, Zhen Chen, Zhen Li, and Jianhua Ma</i>	
Establishing Service Level Agreement Requirement Based on Monitoring	472
<i>Zhang Haiteng, Shao Zhiqing, Zheng Hong, and Zhai Jie</i>	
A Tool for Improving Personalization and Information Sharing Using Implicit Groups	477
<i>Miguel Rangel Pais, Carmen Morgado, and Jose C. Cunha</i>	

Measuring Popularity in Social Network Groups	485
<i>Tânia Leitão, Carmen Morgado, and Jose C. Cunha</i>	
An Enhanced Community Detection Method Based on Neighborhood Similarity	493
<i>Shaoqian Zhang, Zhenxing Liu, and Wanchun Dou</i>	
Finding Popular Friends in Social Networks	501
<i>Fan Jiang, Carson Kai-Sang Leung, and Syed K. Tanbeer</i>	
COG Network Model for Military Planning Based on Improved Analysis Network Process	509
<i>Jiang Wang, Xiu-Qun Feng, Meng Qian, and Cheng Zhu</i>	
Modeling Influence in Online Multi-party Discourse	515
<i>Samira Shaikh, Tomek Strzalkowski, Jenny Stromer-Galley, George Aaron Broadwell, Sarah Taylor, Ting Liu, Veena Ravishankar, Xiaoi Ren, and Umit Boz</i>	
Book Recommendation Based on Joint Multi-relational Model	523
<i>Qiuzi Shangguan, Liang Hu, Jian Cao, and Guandong Xu</i>	
Frequency and Link Analysis of Online Novels Toward Social Contents Ranking	531
<i>Eisuke Ito and Kazunori Shimizu</i>	
An Automated Web Services Composition System Based on Service Classification and AI Planning	537
<i>Shanfeng Qi, Xinhuai Tang, and Delai Chen</i>	
Shortest Path Based Potential Common Friend Recommendation in Social Networks	541
<i>Xiuxia Tian, Yangli Song, Xiaoling Wang, and Xueqing Gong</i>	
Dynamic Media Distribution in Ad-hoc Social Networks	549
<i>Juwel Rana, Johan Kristiansson, and Kare Synnes</i>	
Local Community Detection Using Seeds Expansion	557
<i>Bingying Xu, Zheng Liang, Yan Jia, Bin Zhou, and Yi Han</i>	
InfluenceRank: An Efficient Social Influence Measurement for Millions of Users in Microblog	563
<i>Wenlong Chen, Shaoyin Cheng, Xing He, and Fan Jiang</i>	
Extraction and Analysis of Chinese Microblog Topics from Sina	571
<i>Lin Li and Xing Chen</i>	
Investigating City Characteristics Based on Community Profiling in LBSNs	578
<i>Zhu Wang, Daqing Zhang, Dingqi Yang, Zhiyong Yu, Xingshe Zhou, and Zhiwen Yu</i>	
Who are More Influential Spreaders? Users with Broader Social Circle or with More Friends?	586
<i>Senzhang Wang, Fang Wang, Zhoujun Li, and Xiaoming Zhang</i>	
PSO-TPS: An Optimal Trust Path Selection Algorithm Based on Particle Swarm Optimization in Small World Network	594
<i>Guangquan Xu, Chao Xu, Xiuming Tian, Luxia Zhang, Xiaohong Li, and Weisheng Li</i>	

A Network-Flow Based Influence Propagation Model for Social Networks	601
<i>Wookey Lee, Carson Kai-Sang Leung, Justin Jongsu Song, and Chris Soo-Hyun Eom</i>	
Customer Preference Analysis Based on SNS Data	609
<i>J.S. Kim, M.H. Yang, Y.J. Hwang, S.H. Jeon, K.Y. Kim, I.S. Jung, C.H. Choi, W.S. Cho, and J.H. Na</i>	
Analysis of the Digital Home Wireless Meter Reading Interface Execution Process	614
<i>Hong Zheng, Yihong Wang, and Weimin Zhong</i>	
Mashup Service Classification and Recommendation Based on Similarity Computing	621
<i>Guangrong Wang, Jianxun Liu, Buqing Cao, and Mingdong Tang</i>	
 The Fourth International Workshop on Workflow Management in Service and Cloud Computing (WMSC2012)	
Workflow Refactoring for Concurrent Task Execution	629
<i>Mingzhong Wang, Jinjun Chen, and Liehuang Zhu</i>	
A Performance Analysis on Task Allocation Using Social Context	637
<i>Jiaxing Xu, Zhenguang Huang, Yang Yu, and Maolin Pan</i>	
A Particle Swarm Optimization Algorithm for Batch Processing Workflow Scheduling	645
<i>Yiping Wen, Zhigang Chen, Tiemin Chen, Jianxun Liu, and Guosheng Kang</i>	
 The 2012 International Symposium on Privacy and Security in Cloud and Social Networks (PriSecCSN2012)	
A Consent-patientship Based Privacy Model for Healthcare	650
<i>Teemupekka Virtanen</i>	
Open Social and XACML Based Group Authorization Framework	655
<i>Hui Zhang, Zhenan Li, and Wenjun Wu</i>	
An Advanced Mutual-authentication Algorithm Using 3DES for Smart Card Systems	660
<i>Hippolyte Djonon Tsague, Fulufhelo Nelwamondo, and Ntsika Msimang</i>	
 The 2012 International Symposium on Big Data and MapReduce (BigDataMR2012)	
The Impact of Capacity Scheduler Configuration Settings on MapReduce Jobs	667
<i>Jagmohan Chauhan, Dwight Makaroff, and Winfried Grassmann</i>	
Performance Model for Parallel Matrix Multiplication with Dryad: Dataflow Graph Runtime	675
<i>Hui Li, Geoffrey Fox, and Judy Qiu</i>	
A Content-Based Image Retrieval System Based on Hadoop and Lucene	684
<i>Chunhao Gu and Yang Gao</i>	
Performance Optimization for Short MapReduce Job Execution in Hadoop	688
<i>Jinshuang Yan, Xiaoliang Yang, Rong Gu, Chunfeng Yuan, and Yihua Huang</i>	

Hadoop-Based Genome Comparisons	695
<i>Paul Heinzleiter, Michael T. Krieger, and Iris Leitner</i>	
Big Data Challenges: A Program Optimization Perspective	702
<i>Arun Kejariwal</i>	
Ontology-Based Temporal Relation Modeling with MapReduce Latent Dirichlet Allocations for Big EHR Data	708
<i>Dingcheng Li, Cui Tao, Hongfang Liu, and Christopher Chute</i>	
Beyond Simple Integration of RDBMS and MapReduce—Paving the Way toward a Unified System for Big Data Analytics: Vision and Progress	716
<i>Xiongpai Qin, Huiju Wang, Furong Li, Baoyao Zhou, Yu Cao, Cuiping Li, Hong Chen, Xuan Zhou, Xiaoyong Du, and Shan Wang</i>	
A Selection Strategy Supporting Service Outsourcing in Cloud Platform	726
<i>Jiancheng Ni, Lianyong Qi, and Chao Yan</i>	
 The 2012 International Workshop on Social Network Analysis and Information Diffusion Modeling (SNAIDM2012)	
Rich-Club Connectivity in Large-Scale Complex Networks	730
<i>Rongtian He, Jichang Zhao, and Ke Xu</i>	
Pairwise Interaction Pattern in the Weighted Communication Network	736
<i>Xiao-Ke Xu, Jian-Bo Wang, Ye Wu, and Michael Small</i>	
Modeling of Posting Behavior in Mobile Internet Based on Human Dynamcis	744
<i>Qiang Yan, Lianren Wu, Lanli Yi, and Lianren Wu</i>	
Analysis of Competitive Information Dissemination in Social Network Based on Evolutionary Game Model	748
<i>Jianye Yu, Yuanzhuo Wang, Jingyuan Li, Huawei Shen, and Xueqi Cheng</i>	
Training Opinion Leaders in Microblog: A Game Theory Approach	754
<i>Jingyuan Li, Guoliang Xing, Yuanzhuo Wang, and Yan Ren</i>	
The Untold Story Behind the Recommendation in Micro-blogging Network	760
<i>Tong Man, Hua-Wei Shen, and Xue-Qi Cheng</i>	
 The 2012 International Workshop on Web Wisdom (WW2012)	
A Method of Extracting High Precision Point to Replace in-situ SST Data	765
<i>Hongmei Shi, Lingyu Xu, Cuicui Song, Xiangfeng Luo, Fei Zhong, and Yang Liu</i>	
A Decentralized Approach for Implementing Identity Management in Cloud Computing	770
<i>Jun Chen, Xing Wu, Shilin Zhang, Wu Zhang, and Yanping Niu</i>	

The 2012 International Workshop on Social Network Service on Databases (SNSDB2012)

Finding Core Topics: Topic Extraction with Clustering on Tweet	777
<i>Sungchul Kim, Sungho Jeon, Jinha Kim, Young-Ho Park, and Hwanjo Yu</i>	
Time-Dependent User Profiling for TV Recommendation	783
<i>Jinoh Oh, Youngchul Sung, Jinha Kim, Muhammad Humayoun, Young-Ho Park, and Hwanjo Yu</i>	
A Partitioned-Based Method of Convex Skyline for Efficient Processing Top-k Queries	788
<i>Ki-Eun Lee, Sun-Young Ihm, Jun-Seok Heo, Jeong-Joon Lee, and Young-Ho Park</i>	
UNWRAP: An Approach on Wrapping-Attack Tolerant SOAP Messages	794
<i>Aziz Nasridinov, Jeong-Yong Byun, and Young-Ho Park</i>	
A QoS-Aware Performance Prediction for Self-Healing Web Service Composition	799
<i>Aziz Nasridinov, Jeong-Yong Byun, and Young-Ho Park</i>	
Movie Recommendation System Based on Movie Swarm	804
<i>Sajal Halder, A.M. Jehad Sarkar, and Young-Koo Lee</i>	
A Big Data Model Supporting Information Recommendation in Social Networks	810
<i>Xiaoyue Han, Lianhua Tian, Minjoo Yoon, and Minsoo Lee</i>	
Sequence Data Indexing Method Based on Minimum DTW Distance	814
<i>Kijeong Khil and Seokil Song</i>	
Author Index	819