

2015 12th Web Information System and Application Conference (WISA 2015)

**Jinan, China
11-13 September 2015**



**IEEE Catalog Number: CFP1543I-POD
ISBN: 978-1-4673-9373-7**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1543I-POD
ISBN (Print-On-Demand):	978-1-4673-9373-7
ISBN (Online):	978-1-4673-9372-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2015 12th Web Information System and Application Conference

WISA 2015

Table of Contents

Message from General Co-Chairs.....	X
Message from Program Chairs.....	xi
Conference Organization.....	xii
Program Committee.....	xiii
Reviewers	xv

Social Network

A Method for Latent-Friendship Recommendation Based on Community Detection in Social Network	3
<i>Yonghang Huang, Yong Tang, Chunying Li, Zhengyang Wu, and Haoye Dong</i>	
A Collaborative Filtering Algorithm of Selecting Neighbors Based on User Profiles and Target Item	9
<i>Yaqiong Guo, Mengxing Huang, and Tao Lou</i>	
Friend Recommendation Algorithm Based on User Activity and Social Trust in LBSNs	15
<i>Chengcheng Su, Yaxin Yu, Mingfei Sui, and Haijun Zhang</i>	
Recommending Join Queries Based on Path Frequency	21
<i>Man Yu, Shupeng Han, Yale Chai, Ying Zhang, and Yanlong Wen</i>	
Cross-Platform Instant Messaging System	27
<i>Chengzhou Fu, Yong Tang, Chengzhe Yuan, and Yuying Xu</i>	
A Friend Recommendation Algorithm Based on Multiple Factors in LBSNs	31
<i>Tiancheng Zhang, Wei Wang, Dejun Yue, and Ge Yu</i>	
Popular Topic Detection in Chinese Micro-Blog Based on the Modified LDA Model	37
<i>Yuzhong Chen, Wanhua Li, Wenzhong Guo, and Kun Guo</i>	
Social Emotion Analysis System for Online News	43
<i>Peng Nie, Xue Zhao, Li Yu, Chao Wang, and Ying Zhang</i>	
Multi-source Emotion Tagging for Online News	49
<i>Li Yu, Yang Zhifan, Peng Nie, Xue Zhao, and Ying Zhang</i>	

Emerging Rumor Identification for Social Media with Hot Topic Detection	53
<i>Zhifan Yang, Chao Wang, Fan Zhang, Ying Zhang, and Haiwei Zhang</i>	

Big Data & Cloud Computing

SLOF: Identify Density-Based Local Outliers in Big Data	61
<i>Haowen Guan, Qingzhong Li, Zhongmin Yan, and Wei Wei</i>	
Efficient Top-k Skyline Computation in MapReduce	67
<i>Baoyan Song, Aili Liu, and Linlin Ding</i>	
A Nearby Vehicle Search Algorithm Based on HBase Spatial Index	71
<i>Dandan Shen, Jun Fang, and Yanbo Han</i>	
Distributed Storage and Analysis of Massive Urban Road Traffic Flow Data Based on Hadoop	75
<i>Liujiang Zhu and Yun Li</i>	
Towards Model Based Approach to Hadoop Deployment and Configuration	79
<i>Yicheng Huang, Xingtuo Lan, Xing Chen, and Wenzhong Guo</i>	
Multilingual Information Retrieval and Smart News Feed Based on Big Data	85
<i>Ye Liang, Ningning Guo, Chunxiao Xing, Yong Zhang, and Chao Li</i>	
A Novel Approach to Improving Resource Utilization for IaaS	89
<i>Hui Dou, Yong Qi, and Pengfei Chen</i>	
A New Method for Balancing Cloud Resource	95
<i>Heng Song, Junwu Zhu, Yi Jiang, and Bin Li</i>	
A MMDB Cluster Based Cloud Platform for Query-Intensive Web Information Systems	99
<i>Aipeng Li, Xing Chen, Yuanbin Xu, Xuee Zeng, Xingtuo Lan, and Wenzhong Guo</i>	

Web Semantics and Services

Computing Terms Semantic Relatedness by Knowledge in Wikipedia	107
<i>Dexin Zhao, Liangliang Qin, Pengjie Liu, Zhen Ma, and Yukun Li</i>	
Analyzing the Evolution of Ontology Versioning Using Metrics	112
<i>Zhiyuan Li, Zhiyong Feng, Xin Wang, Yuan-Fang Li, and Guozheng Rao</i>	
Medical Ontology Learning Based on Web Resources	116
<i>Jun Peng, Yaru Du, Ying Chen, Ming Zhao, and Bei Pei</i>	
An Approach for Mapping Relational Database into Ontology	120
<i>Mohamed A. G. Hazber, Ruixuan Li, Yuxi Zhang, and Guandong Xu</i>	
Research on Semantic++ Computing Based on Big Data Environment	126
<i>Ye Liang, Guigang Zhang, Chunxiao Xing, Yong Zhang, and Chao Li</i>	
Efficient Name Lookup Scheme Based on Hash and Character Trie in Named Data Networking	130
<i>Yun Tan and Shuhua Zhu</i>	

SLA-oriented Research on Prediction and Evaluation of Service Components Performance	136
<i>Guo Jun, Yan Yongming, Zhang Bin, and Ma Qingmin</i>	
A Firewall Rules Optimized Model Based on Service-Grouping	142
<i>Lin Zhang and Mengxing Huang</i>	
A Probabilistic Approach to Analyzing the Stochastic QoS of Web Service Composition	147
<i>Xiaosa Wang, Xiaodong Fu, Li Liu, Qingsong Huang, and Kun Yue</i>	

Web Information Management

Truth Finding from Multiple Data Sources by Source Confidence Estimation	153
<i>Fan Zhang, Li Yu, Xiangrui Cai, Ying Zhang, and Haiwei Zhang</i>	
An Algorithm for URL Routing Based on Trie Structure	157
<i>Yijun Zhang and Lizhen Xu</i>	
A Method to Discover Truth with Two Source Quality Metrics	161
<i>Dong Yu, Derong Shen, Mingdong Zhu, Tiezheng Nie, Yue Kou, and Ge Yu</i>	
Research on Column Concept Vector Based Web Table Matching	165
<i>Chao Chen and Yue Zhao</i>	
Based on Entities Behavior Patterns of Heterogeneous Data Semantic Conflict Detection	169
<i>Haiyang Zhang, Zhongmin Yan, Chenfei Sun, and Song Wei</i>	
Collaborative Information Retrieval Framework Based on FCA	175
<i>Wenyan Bao, Cencheng Shen, and Yun Li</i>	
Fihuo: A Moblie Smart Health Service Platform	179
<i>Ming Sheng, Yong Zhang, Jigang Yang, Chao Li, and Chunxiao Xing</i>	
A Smart Task Scheduling Strategy of Orderly Power Utilization Based on Priority	184
<i>Ji Tao, Zhao Li, Wang Gang, and Tan Yuan-Gang</i>	

Web Database & Recommendation

An Algorithm for LBS-based Schedule Recommendation with Time Constraint	191
<i>Cai Yuxiang, Zhao Zhibin, Yao Lan, and Bao Yubin</i>	
A Collaborative Filtering Recommendation Algorithm with Time Adjusting Based on Attribute Center of Gravity Model	197
<i>Liangyou Gao and Mengxing Huang</i>	
Tourist Routs Recommendation Based on Latent Dirichlet Allocation Model	201
<i>Zhiqiang He, Zhongyi Wu, Bochong Zhou, Lei Xu, and Weifeng Zhang</i>	
Research on the Semantic of Entity-Oriented U-Topk Query and Its Processing	207
<i>Ma Zhengbing, Zhao Zhibin, Yao Lan, Bao Yubin, and Yu Ge</i>	

An Information Update Method Towards Internal Search Engine	211
<i>Zhifan Bian, Yukun Li, Tinghai Yue, Pengfei Lei, Dexin Zhao, and Yingyuan Xiao</i>	
A Combined Index for Mixed Structured and Unstructured Data	217
<i>Chunying Zhu, Qingzhong Li, Lanju Kong, and Song Wei</i>	
Implementation Strategies for CSV Fragment Retrieval over HTTP	223
<i>Junhua Wang, Zhuoming Xu, and Jin Zhang</i>	
A Unified Storage and Query Optimization Framework for Sensor Data	229
<i>Ting Lu, Jun Fang, and Cong Liu</i>	
ACID Encountering the CAP Theorem: Two Bank Case Studies	235
<i>Chao Kong, Ming Gao, Weining Qian, Minqi Zhou, Xueqing Gong, Rong Zhang, and Aoying Zhou</i>	
Graph-Based Web Query Classification	241
<i>Chunwei Xia and Xin Wang</i>	

Web Intelligence

Short Text Sentiment Entropy Optimization Based on the Fuzzy Sets	247
<i>Tao Jiang, Bin Yuan, Jing Jiang, and Hongzhi Yu</i>	
RABBIT: Rank-Based BIClustering Algorithm	251
<i>Linglin Huang, Qing Liu, Nan Yang, Yaping Li, and Lin Xiao</i>	
MEG Classification Based on Band Power and Statistical Characteristics	255
<i>Shiyu Yan, Qingwen Yu, and Hong Wang</i>	
Mining Event Associations Using Structured Data and Classifiers	259
<i>Jinxin Zhao, Xinjun Wang, Zhongmin Yan, and Song Wei</i>	
An Unsupervised Approach for Constructing Word Similarity Network	265
<i>Yu Hu, Tiezheng Nie, Derong Shen, and Yue Kou</i>	
A Hierarchical Clustering for Categorical Data Based on Holo-Entropy	269
<i>Haojun Sun, Rongbo Chen, Shulin Jin, and Yong Qin</i>	
An Improvement of Fuzzy C-Means Clustering Using Adaptive Particle Swarm Optimization	275
<i>Shouwen Chen, Zhuoming Xu, and Yan Tang</i>	
A Credit Scoring Model Based on Bayesian Network and Mutual Information	281
<i>Yuanhang Zhuang, Zhuoming Xu, and Yan Tang</i>	
An Approach to Instantly Detecting Fake Plates Based on Large-Scale ANPR Data	287
<i>Yue Li and Chen Liu</i>	
A Strategy of Inferring Containment Relationship Based on Multiple Readers' Three-State Model	293
<i>Tiancheng Zhang, Baojun Wang, Fan Kai, and Chunliang Zhang</i>	
Multi-relational Clustering Based on Relational Distance	297
<i>Liting Wei and Yun Li</i>	

Web Technique and Application

Challenges and Issues in Trajectory Streams Clustering upon a Sliding-Window Model	303
<i>Jiali Mao, Cheqing Jin, Xiaoling Wang, and Aoying Zhou</i>	
Design and Implementation of Electric Charge Arrears Prediction System	309
<i>Wenzhong Guo, Wei Hong, Wanhua Li, and Kun Guo</i>	
A Fault Diagnosis Expert System Based on Aircraft Parameters	314
<i>Qi Yao, Jian Wang, and Guigang Zhang</i>	
Design and Implementation of Streaming Application Execution Platform in Android	318
<i>Binji Mo, Wenjuan Tang, Yang Xu, and Guojun Wang</i>	
A Blocked Rainbow Table Time-Memory Trade-Off Method	324
<i>Hongwei Lu, Xiaoheng Zhu, and Zaobin Gan</i>	
A Method of JavaScript Path Obfuscation Based on Collatz Conjecture	330
<i>Shukai Qin Zhenyu Wang, Yonghong Wang, and Kaijie Xu</i>	
Receive CPU Selection Framework: Cross-Layer Optimization In Network Stack to Improve Server Scalability	334
<i>Jiaquan He, Yu Chen, Yong Zhang, and Chunxiao Xing</i>	
On the Group Theory Based Model Transform Definition	340
<i>Yanbing Jiang and Chunxiao Xing</i>	
Author Index	346