

2012 Third International Conference on Networking and Distributed Computing

(ICNDC 2012)

**Hangzhou, China
21 – 24 October 2012**



IEEE Catalog Number: CFP1289K-PRT
ISBN: 978-1-4673-2858-6

2012 Third International Conference on Networking and Distributed Computing

ICNDC 2012

Table of Contents

Message from General Co-chairs and Program Co-chairs.....	ix
ICNDC 2012 Organizing Committee.....	xi
ICNDC 2012 Steering Committees.....	xii
ICNDC 2012 Program Committees.....	xiii

Content Centric Networking and Parallel Computing

Live Streaming with Content Centric Networking	1
<i>Hongfeng Xu, Zhen Chen, Rui Chen, and Junwei Cao</i>	
Parallelizing FIB Lookup in Content Centric Networking	6
<i>Shuai Ding, Zhen Chen, and Zhi Liu</i>	
A Data Structure for Content Cache Management in Content-Centric Networking	11
<i>Haopei Wang, Zhen Chen, Feng Xie, and Fuye Han</i>	
Reality Check of CCN Routing Using Search Processor	16
<i>Yong Liang, Zhen Chen, Jun Li, and Shuai Ding</i>	
Reformat Named Data Networking with Cryptographic Message Syntax	21
<i>Erlong Min, Zhen Chen, Rui Chen, and Dongsheng Wang</i>	
A Method of Accelerating LDA Program with GPU	26
<i>Yanjun Jiang, Hualong Wen, and Zhanchun Gao</i>	
An Implementation of High Performance Parallel KNN Algorithm Based on GPU	30
<i>Lican Huang, Zhen Liu, Zhiwen Yan, Piaoyue Liu, and Qingpeng Cai</i>	
Application of Parallel Computing on Large Scale Atmospheric Nucleation	31
<i>Yanrui Liu, Kai Zhu, Aseda Aboagye, and Jinzhu Gao</i>	
An Easy Matrix Computation Based Simulator of NDN	36
<i>Xiaoke Jiang, Jun Bi, You Wang, Pingping Li, and Zhaogeng Li</i>	

Cloud Computing and Internet of Things

Research and Evaluation of Network Virtualization in Cloud Computing Environment	40
<i>Zongjian He and Guanqing Liang</i>	
Research on Education Reform of Negative Feedback Teaching Process Based on Cloudy Computing	45
<i>Yang Li and Bin Hu</i>	
Enabling Distributed Computing Systems with ElopTM	49
<i>Junwei Cao, Shuo Chen, Yuxin Wan, and Wei Chen</i>	
The Algorithm for Constructing Extremal Graphs Based on MapReduce	54
<i>Sun Yongqi, Zhao Nan, and Zhang Rui</i>	
Research on Hadoop Cloud Computing Model and its Applications	59
<i>Huang Lu, Chen Hai-Shan, and Hu Ting-Ting</i>	
The Reform of Three-Dimensional to the Practice of Telecommunication System for the Applications of Internet of Things	64
<i>Ji-Jun Tong, Jing Huang, Hua-Xiong Zhang, and Hong Zhuang</i>	
A Strategy for Mesh Client Mobility Support in Wireless Mesh Networks	69
<i>Lican Huang, Zhiwen Yan, Zhen Liu, and Hao Huang</i>	

Networking

Using Dynamic Programming in Delay Tomography	72
<i>Weiping Zhu</i>	
RRCP: A Receiver-Driven and Router-Feedback Congestion Control Protocol for ICN	77
<i>Chunmei Xia and Mingwei Xu</i>	
An Adaptive bit-allocation Method Based on Perceptual Quality Smoothing for Wireless Video Communications	82
<i>Hanjie Ma, Jie Feng, Hai Huang, Huaxiong Zhang, and Jie Hu</i>	
A Trusted Opportunistic Routing Algorithm for Vanet	86
<i>Jie Zhizhong, Huang Chuanhe, Xu Liya, Wang Bo, Chen Xi, and Fan Xiyi</i>	
Performance Comparison of Multipath and Unipath Routing in Static Scenarios	91
<i>Zheng Wan</i>	
A Service Differentiation Based Adaptive p-persistent MAC Scheme	95
<i>Wang Xiao-Dong, Chen Xiao, Min Jie, and Zhang Lian-Jun</i>	
A New Mechanism of QoS Dynamic Evaluation in Real-time Media Multipath Transmission	100
<i>Chen Xiao, Lei Weimin, Zhang Wei, and Li Manpo</i>	
e-Learning Based on Semantic P2P Networks	105
<i>Lican Huang</i>	
Research of Automatic Digital Multimeter Interface Technology Based on UART	108
<i>Huang Jing, Qiao Leling, and Zhang Hanbo</i>	

Implementation of Broken-point Continually-transferring Based on C#.NET	111
<i>Jiaoli Fang, Ming Liu, and Jianhua Wang</i>	
Comparative Research on Internet Flows Characteristics	114
<i>Xiaoguo Zhang and Wei Ding</i>	
On Detection Accuracy of L7-filter and OpenDPI	119
<i>Chaofan Shen and Leijun Huang</i>	
Algorithms for Finding Maximum Reliability Many-to-Many Multicast Routing under a Fixed Topology	124
<i>Wei Ding, Xuerui Wei, Xuelin Nie, and Ming Zhou</i>	
The Influence of SNS Network Environment on University Students and the Probe of its Strategies	128
<i>Yan Chen and Ji-Le Wu</i>	
Suboptimum Multiuser Receivers for Coded IDMA Systems	132
<i>Peng Haibo, Ji Jianhua, Wu Shaohao, and Li Yilong</i>	
Control Systems and Image Processing	
The Research of High Frequency Soft Switching Power Supply Control Circuit	136
<i>Zhang Yinhai and Zhao Yunmeng</i>	
An Asynchronous Motor Vector Control System Considering the Variation of Rotor Resistance	140
<i>Zhang Yinhai and Chen Zhikui</i>	
Research of System for Design of Geothermal Exchanger in Ground Source Heat Pump	144
<i>Jifeng Xu and Suntao Qin</i>	
Development of Communication Interface for Vortex Flowmeter Platform Based on Embedded μC / OS-III	148
<i>Huang Jing, Chen Hao, and Zhang Hanbo</i>	
A Virtual View Synthesis Algorithm Based on Image Inpainting	153
<i>Huayang Wu, Jie Feng, Huaxiong Zhang, and Qiankun Lv</i>	
Superpixel Based Depth Propagation for Semi-Automatic 2D-to-3D Video Conversion	157
<i>Jie Feng, Hanjie Ma, Jie Hu, Li Cao, and Huaxiong Zhang</i>	
An Effective Background Reconstruction Method for Video Objects Detection	161
<i>Li Cao and Yi Jiang</i>	
Pedestrian Detection Based on ISC in Infrared Images	166
<i>Lianna Chen, Wenshu Li, Zhengxi Xu, and Limei Tang</i>	
A Scale Adaptive Kalman Filter Method Based on Quaternion Correlation in Object Tracking	170
<i>Jie Hu, Huaxiong Zhang, Jie Feng, Hai Huang, and Hanjie Ma</i>	

Distributed Systems, Security and Data Mining

The Research on Fuzzy Bayesian Network Model for the Network Public Opinion Situation and Threat Assessment	175
<i>Jiaoli Fang, Jianming Huang, and Ming Liu</i>	
Study on the Foundation Theoretical Framework of COT-Oriented Cooperative Operation of System Resources	179
<i>Yushi Lan and Chenghao Guo</i>	
Research on the Restraint Mechanism for the Low-carbon Operation of Industrial Cluster	185
<i>Qin Sun-tao and Xu Ji-feng</i>	
The Implementation of TT & C Software Sharing Prototype System	190
<i>Li Xiangming, Zhang Xiaohong, Li Qingmei, Bai Xiaoshu, and Guo Libing</i>	
Application Analysis of Automated Testing Framework Based on Robot	194
<i>Liu Jian-Ping, Liu Juan-Juan, and Wang Dong-Long</i>	
SMIP-WPS: An Scientific Model Integration Platform Using Web Processing Service	198
<i>Neng Gong, Xuezhi Wang, Yuanchun Zhou, Jianhui Li, Shasha Li, Xiao Xiao, Li Zhang, Xinzhai Tang, and Honglin He</i>	
Optimized Methods to Estimate Lower and Upper Bounds for Approximate Cycle Matching in Homogeneous Symmetric Pub/Sub System	203
<i>Botao Wang, Lijun Wang, Pingping Liu, and Yanbo Bi</i>	
An Improved Apriori Algorithm Based on Association Analysis	208
<i>Yubo Jia, Guanghu Xia, Hongdan Fan, Qian Zhang, and Xu Li</i>	
The Application of Data Mining and the Newsboy Model in B2B E-Commerce Supply Chain	212
<i>Dao-Lei Liang</i>	
Author Index	216