Advance Program
2007 International Conference on Networking, Architecture, and Storage
Guilin, China

**July 29th, 2007**

8:30am – 9:00am: Breakfast¹

9:00am – 10:00am: Welcome

Keynote speech

Virtualization, Performance, and Energy Conservation in Storage Data Centers

*Peter Varman, Rice University*

10:00am – 10:30am: Coffee/Tea Break

10:30am – 12:00noon  Session 1A: Architecture, Chair: Qing Yang

- Design of NIC Based on I/O Processor for Cluster Interconnect Network, Xiaojun Yang, Ninghui Sun, Institute of Computing Technology, Chinese Academy of Sciences.
- The bi-panpath connectivity of the hypercube, Jywe-Fei Fang, Ko-Lin Lin Department of Digital Content and Technology, National Taichung University.
- The Implementation and Design of a Low-power Clock Distribution Microarchitecture, Rong Ji, Xianjun Zeng, Liang Chen, Junfeng Zhang, National University of Defense Technology.

10:30am – 12:00noon  Session 1B: Networks I, Chair: Xubin He

- More Efficient Mechanism of Topology-Aware Overlay Construction in Application-Layer Multicast, Jianjun Cui¹ ², Yuxiang He¹, Lijing Wu¹, School of Computer, Wuhan University; Institute of Computer & Communication Technology, Huazhong Normal University.
- MLCC: A Multi Layered Correlative Control Mechanism for the VPN Topology, Kai Ouyang, School of Computer Science Wuhan Univ. of Sci. & Tech.; Xiaowen Chu, Department of Computer Science Hong Kong Baptist Univ.; Lijun Dong, School of Computer Science Huazhong Univ. of Sci. & Tech.; Hengqing Wang, School of Computer Science Wuhan Univ. of Sci. & Tech.; Ting Cai, School of Computer Science Wuhan Univ. of Sci. & Tech.;
- The Dynamic Endpoint-Based Access Control Model on VPN, Lijun Dong, Shengsheng Yu, College of Computer Science, Huazhong Univ. of Sci. & Tech., Wuhan, Kai Ouyang, College of Computer Science, Wuhan Univ. of Sci. & Tech.

12:00noon – 2:30pm Lunch¹ and Industrial Panel/Presentations

2:30pm – 4:00pm: Session 2A: Networks II, Chair: TBD

- Routing Protocols Based on Double Auction for Ad Hoc Networks, Zhongsheng Wu, Zhide Chen, Li Xu, Fujian Normal University.
- A Novel Cooperative Caching Scheme for Wireless Ad Hoc Networks: GroupCaching, Yi-Wei Ting, Yi-Min Kuan Chang, National Cheng-Kung University.
- An Optimal MPLS-TE Solution to Route Selection and Redistribution on Congested Networks, Chengcheng Li, Peng Li, Tijjani Mohammed, East Carolina University.

2:30pm – 4:00pm: Session 2B: Network Security I, Chair: TBD

- An Improved Designated-Verifier Proxy Signature Scheme, Jianhong Zhang, Wei Zou, North China University of Technology.
- PKI-Based Authentication Mechanisms in Grid Systems, Shushe Zhao, Akshai Aggarwal and Robert D. Kent, University of Windsor.
- Assessing the Attack Threat by the Probability of Following Attacks, Zhi-tang Li, Jie Lei, Li Wang, Dong Li, and Yang-ming Ma, Huazhong University of Science and Technology.

¹ All breakfasts and coffee breaks, the first day lunch, and the conference banquet are provided by the conference.
4:00pm – 4:30pm Coffee/Tea Break

4:30pm – 6:00pm: Session 3A: Network Security II, Chair: TBD

- **Mitigating Denial of Capability with An Notification Mechanism**, Guang Jin, Jiangang Yang, Wei Wei and Yabo Dong, Zhejiang University
- **HKM: A Hybrid Key Management Scheme for Secure Mobile Multicast**, Lin Lin and XueMin Li, Chongqing University
- **Discovering Novel Multistage Attack Patterns in Alert Streams**, Ai-fang Zhang, Zhi-tang Li Dong Li and Li Wang, Huazhong University of Science and Technology
- **Safeguarding Against Sybil Attacks via Social Networks and Multipath Routing**, Chittaranjan Hota, Janne Lindqvist, Kristiina Karvonen, Antti Ylä-Jääski, and Mohan C.K.J, Birla Institute of Technology & Science

4:30pm – 6:00pm: Session 3B: Sensor Networks and Others, Chair: TBD

- **Mining Two Dimensional Attributes Patterns in Sensor Networks**, Yuanguo Cheng¹,², Guohui Li¹,³ Huazhong University of Science and Technology;³Navy Engineering University
- **An Active Region-based Storage Mechanism in Large Wireless Sensor Networks**, Xiongzi Ge, Dan Feng, Lei Tian, Huazhong University of Science and Technology
- **A Novel Network Management Architecture for Self-organized Network**, Li Jun¹,², Zhang Shunyi³, Zhang Zailong⁴, Wang Pan¹,¹ Nanjing University of Posts and Telecommunication;²Zhejiang Wanli University

Conference Banquet and Keynote Speech:

Current Status of China’s Data Storage Research and Development

Changsheng Xie, Huazhong University of Science and Technology
July 30th, 2007
8:30am – 9:00am: Breakfast
9:00am – 10:00am: Keynote speech
Exploring NoC Design Space for Multicore Architectures
Chita Das, Penn State University
10:00am – 10:30am: Coffee/Tea Break
10:30am – 12:00noon Session 4A: Distributed Computing and Software Testing, Chair: Rich Sincovec
- An Peer-To-Peer Traffic Identification Method Using Machine Learning, Hui Liu, Wenfeng Feng, Yongfeng Huang, Xing Li, Tsinghua University
- GSM-R: A Hybrid Scheduling Approach to Dynamic Load Balancing in Hierarchical Cluster of Servers, Jincui Chen, Gongye Zhou, Huazhong University of Science & Technology
- Priority Strategy of Software Fault Localization, SUN Ji-Rong, LI Zhi-Shu, NI Jian-Cheng, Sichuan University, YIN Feng, Southwest University for Nationalities, Sichuan University

10:30am – 12:00noon Session 4B: Storage I, Chair: TBD
- An Efficient SAN-Level Caching Method Based on Chunk-Aging, Yang Wang, Wei Xue, Yifeng Luo, Jiwu Shu, Tsinghua University
- FTRAID: A Fat-tree Based Parallel Storage Architecture for Very Large Disk Array, Zhikun Wang, Ke Zhou, Dan Feng, Lingfang Zeng, Junping Liu, Huazhong University of Science & Technology
- A new data format and error control scheme for Optical Storage Systems, Wei Hu, Diqing Hu, Changsheng Xie, Fan Chen, Huazhong University of Science & Technology
- iSAN: Storage Area Network Management Modeling Simulation, Ramani Routray, Sandeep Gopisetty, Pallavi Galgali, Amit Modi, Shripad Nadgowda, IBM Research

12:00noon – 2:00pm Lunch

2:00pm – 3:30pm: Session 5A: Storage II, Chair: TBD
- Dynamics Process of Long-running Allocation/Collection in Linear Storage Space, Cao Qiang, Guo Tian-jie, Xie Chang-sheng, Huazhong University of Science & Technology
- A New Method Pefetching I/O Requests Area, Li Huai Yang, Xie Chang Shen, Liu Yan, Huazhong University of Science & Technology
- Performance Evaluation of A Load Self-Balancing Method for Heterogeneous Metadata Server Cluster Using Trace-Driven and Synthetic Workload Simulation, Bin Cai, Changsheng Xie, Guangxi Zhu, Huazhong University of Science & Technology
- DiskGroup: Energy Efficient Disk Layout for RAID1 Systems, Lanyue Lu and Peter Varman, Rice University, Jun Wang, University of Central Florida

2:00pm – 3:30pm: Session 5B: Short Papers I: Architecture and Storage, Chair: TBD
- M2SI A improved Coherency Protocol in CMP, Pengyong Ma, National University of Defense Technology
- An Adaptive Arbitration Algorithm for SoC Bus, Haishan Li, Ming Zhang, Wei Zheng, Dongxiao Li, Zhejiang University
- The System Design and Performance Analysis of WiMAX Base Station MAC Based on Intel Network Processor, Ming Wu, Changsheng Xie, Fei Wu, Huazhong University of Science and Technology
- Dynamic Power Management and Dynamic Voltage Scaling in Real-time CMP Systems, Lei Mao, Yong Qi, Di Hou, Xi’an Jiaotong University
Research and Implementation of RAID algorithm base on RAID controller, Jiang Guo-song, Xie Chang-sheng, Wang Bo, Huazhong University of Science and Technology

B+ Tree Management Method of Object Attributes for Object-Based Storage, Gongye Zhou, Lanlan Yuan, Jincai Chen, Huazhong University of Science and Technology

3:30pm – 4:00pm Coffee/Tea Break

4:00pm – 5:30pm Session 6A: Short Papers II: Networks, Chair: TBD

- An analytical model for evaluating utilization of TCP TAHOE using markovian model, mehdi hassani, Iran University of Science and Technology
- A Sliding Window Based Security Event Correlation, Jiafu Hu, Information Engineering University, Yongliang Dong, Henan Normal University
- Safety Critical Network Based on Fibre Channel, Yue Wang, WanDong Cai, Qi Duan, Northwestern Polytechnical University
- Distributed Fault Monitoring Scheme based on optical power for Optical Burst Switching Network, Ruyan Wang, Jiaofa Chang, Kejing Long, Xiaolong Yang, Special Research Centre for Optical Internet & Wireless Information Networks, Univ. of Electronic Science and Technology of China
- A scalable multicast key management to expel a malicious reciever in MARKS, Ma Xiaojing, Li Zhitang, Li Yao, Zhong Jiping, Huazhong University of Science and Technology

4:00pm – 5:30pm Session 6B: Short Papers III, Storage Chair: TBD

- RH-SCSI: A Reliable HyperSCSI Protocol for Networking Storage, Gongye Zhou, Peng Chen, Huazhong University of Science and Technology
- A New Method for RAID Consistency Initialization, Zhihu Tan Changsheng Xie Jiguang Wan, Huazhong University of Science and Technology, Wuhan National Laboratory for Optoelectronics
- Implementation and performance evaluation of an iSCSI-Based Storage Virtualization, Guang Yang, Jingli Zhou, Chao Liu, Huazhong University of Science and Technology
- An Object-based Storage Controller Based on Switch Fabric, Shuibing He, Dan Feng, Huazhong University of Science and Technology
- Design and Implementation of an Efficient Multi-version File System, XIANG Xiao-Jia, SHU Ji-Wu, XUE Wei, ZHENG Wei-Min, Tsinghua University