

ZHENG GUO

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RESEARCH INTERESTS

My research interests are in the areas of computer networks. Specifically, I am interested in topics on network measurement, network modeling and performance evaluation for the Internet and underwater sensor networks.

EDUCATION

- **Ph.D. candidate (GPA until now: 4.0)** *Sept. 2005 - Present*
Computer Science & Engineering Department, University of Connecticut
Advisors: Bing Wang, Jun-Hong Cui
- **B. E. in Electronic Engineering and Information Science** *July 2005*
University of Science of Technology of China (USTC)

AWARDS/HONORS

- Second Prize in the Second Contest of Model Design, University of Science and Technology of China (USTC), 2003.
- Scholarship (4 times) for excellence in undergraduate study, University of Science and Technology of China (USTC), 2001-2005

PUBLICATIONS

Journal Papers

1. **Multipath Live Streaming via TCP: Scheme, Performance and Benefits**, Bing Wang, Wei Wei, **Zheng Guo** and Don Towsley. *Accepted for publication in ACM Transactions on Multimedia Computing Communications and Applications (TOMCCAP)*.
2. **Application-layer Multipath Data Transfer via TCP: Schemes and Performance Tradeoffs**, Bing Wang, Wei Wei, Jim Kurose, Don Towsley, Krishna R. Pattipati, **Zheng Guo** and Zheng Peng. *Performance Evaluation*, Vol. 64, Issues 9-12, pp. 965-977, October, 2007.
3. **Efficient Error Recovery using Network Coding in Underwater Sensor Networks**, **Zheng Guo**, Peng Xie, Wei Zeng, Bing Wang and Jun-Hong Cui. *Accepted for publication in Elsevier Ad Hoc Networks, Special Issue on Underwater Networks, May 2008*

Conference Papers

1. **Non-Binary Joint Network and Channel Coding for Underwater Sensor Networks**, **Zheng Guo**, Jie Huang, Bing Wang, Jun-Hong Cui, Shengli Zhou and Peter Willett. *Proceeding of WUWNET'08, San Francisco, CA, September, 2008*
2. **Multipath Live Streaming via TCP: Scheme, Performance and Benefits**, Bing Wang,

Wei Wei, **Zheng Guo** and Don Towsley. *Proceedings of CoNext 2007, New York, NY, December 10-13, 2007*

3. **Adaptive Routing in Underwater Delay/Disruption Tolerant Networks**, **Zheng Guo**, Gioele Colombi, Bing Wang, Jun-Hong Cui and Dario Maggiorini. *Extended abstract, Proceedings of WUWNET'07, Montreal, Quebec, Canada, September 14, 2007*
4. **Application-layer Multipath Data Transfer via TCP: Schemes and Performance Tradeoffs**, Bing Wang, Wei Wei, Jim Kurose, Don Towsley, Krishna R. Pattipati, **Zheng Guo** and Zheng Peng, *Proceedings of Performance (Performance 2007), Cologne, Germany, October, 2007.*
5. **Efficient Error Recovery with Network Coding in Under Water Sensor Networks**, **Zheng Guo**, Bing Wang and Jun-Hong Cui, *proceeding of the sixth event in a series of International Conferences on Networking (Networking2007), Atlanta, GA, May 14-18, 2007*
6. **On Applying Network Coding to Underwater Sensor Networks**, **Zheng Guo**, Peng Xie, Jun-Hong Cui and Bing Wang, *Proceeding of WUWNET'06, Los Angeles, CA, Sep. 25, 2006*

RESEARCH EXPERIENCE

- **Research assistant** **September 2005 – present**
Computer Science & Engineering Department, University of Connecticut
 - 05/2008 – present **Joint Network and Channel Coding**
 - 01/2007 – present **Efficient Broadcast in Underwater Sensor Networks**
 - 01/2007 – present **Routing design in Delay Tolerant Underwater Sensor Networks**
 - 06/2006 – 12/2006 **Efficient Error Recovery with Network Coding for Underwater Sensor Networks**
 - 07/2006 **IMPLEMENTATION for Multi-path Live Streaming via TCP**
 - 01/2006 – 05/2006 **IMPLEMENTATION for Multi-path Overlay Data Transfer**
- **Member in reading group of Data Transfer in Networks** **January 2006-August 2006**
Computer Science & Engineering Department, University of Connecticut
- **Research assistant** **September 2004 – July 2005**
Information Network (InfoNet) Lab, University of Science and Technology of China (USTC)

TALKS & DEMOS

- **Adaptive Routing in Underwater Delay/Disruption Tolerant Networks**, *Presented in the second Workshop of Underwater Sensor Networks (WUWNet'07), , Quebec, Canada, September 14, 2007*
- **Efficient Error Recovery with Network Coding in Under Water Sensor Networks**, *Presented at Networking 2007, Atlanta, GA, May 18, 2007*
- **Poster: On Applying Network Coding to Underwater Sensor Networks**, *presented in the first Workshop of Underwater Sensor Networks (WUWNet'06), Los Angeles, CA, Sept. 25, 2006*

SERVICES

- *Staff in the Twelfth Annual International Conference on Mobile Computing and Networking (MobiCom2006), Los Angeles, CA, Sep. 24-29, 2006*

SKILLS

- C/C++, Java, Perl, Tcl/Otcl, Linux shell script, socket programming, matlab programming.
- Strong Network background.
- Network Simulator 2 (NS2), PlanetLab Test-bed.
- Operating System: Linux, Windows NT/2K/XP.