

Curriculum Vita

Assistant Professor, Ph.D.
Department of Computer Science and Software Engineering
Seattle University
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Yingwu Zhu

EDUCATION:

University of Cincinnati (UC) Cincinnati, OH
Ph.D. in Computer Science & Engineering Sept. 2005
Advisor: Prof. Yiming Hu
Thesis: *Enhancing Search Performance in Peer-to-Peer Networks (the thesis is being for sale on Amazon at \$69.99)*

Huazhong University of Science & Technology (HUST) Wuhan, China
M.S. in Computer Science June 1997
Advisor: Prof. Yansheng Lu
Thesis: *Design and Implementation of a Distributed, Real-Time Database System*

Huazhong University of Science & Technology (HUST) Wuhan, China
B.S. in Computer Science June 1994
Advisor: Prof. Yansheng Lu
Thesis: *Design and Implementation of Query Optimizations for a Real-Time Database System*

HONORS AND GRANTS:

Seattle University

- 2007 Summer Faculty Research Grant from Seattle University for research project entitled “Global-Scale Information Dissemination Using a Content-Based Publish/Subscribe Model”
- 2006 Summer Faculty Research Grant from College of Science & Engineering for research project entitled “Replica Maintenance in P2P Storage Systems”

University of Cincinnati

- University Graduate Research Fellowship (2000-2005)
- University Summer Research Fellowship (2001-2004)

Huazhong University of Science & Technology

- University Excellent Undergraduate and University Excellent Graduate
- University Excellent Student First Scholarship
- Guanghua First Class Scholarship, Yangguang First Class Scholarship, and Siemens First Class Scholarship
- Admitted to the graduate school with the entrance exam waived due to undergraduate academic excellence

COURSES TAUGHT:

Prior to Seattle University

- C/C++ Programming, Design & Analysis of Algorithms, Advanced Operating Systems (graduate level)

Seattle University

- CSSE 250 - Data Structures
- CSSE 340 - Operating Systems
- CSSE 444 - Concurrent and Distributed Systems
- CSSE 493 - Peer-to-Peer Networks

RESEARCH INTERESTS:

Distributed systems, peer-to-peer systems, file and storage systems, operating systems, and computer networks

REFEREED PUBLICATIONS:

Book Chapters

1. **Yingwu Zhu** and Yiming Hu, "[Semantic Search in Peer-to-Peer Systems](#)," *Handbook of Theoretical and Algorithmic Aspects of Ad Hoc, Sensor, and Peer-to-Peer Networks*. J. Wu (ed.), Auerbach Publications, Pp. 643-664, 2006.

Journal Papers

2. **Yingwu Zhu** and Yiming Hu, "Efficient Semantic Search on DHT Overlays", *Journal of Parallel and Distributed Computing (JPDC)*. To appear.
3. **Yingwu Zhu** and Yiming Hu, "Ferry: A P2P-Based Architecture for Content-Based Publish/Subscribe Services," *IEEE Transactions on Parallel and Distributed Systems (TPDS)*. To appear.
4. **Yingwu Zhu** and Yiming Hu, "Enhancing Search Performance on Gnutella-like P2P Systems," *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, VOL. 17, NO. 12, Pp. 1482-1495, December 2006.
5. **Yingwu Zhu** and Yiming Hu, "SurePath: An Approach to Resilient Anonymous Routing," *International Journal of Network Security (IJNS)*. To appear.
6. **Yingwu Zhu** and Yiming Hu, "Exploiting Client Caches to Build Large Web Caches," *Journal of Supercomputing*. To appear.
7. **Yingwu Zhu** and Yiming Hu, "Efficient, Proximity-Aware Load Balancing for DHT-Based P2P Systems," *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Pp. 349-361, VOL. 17, NO. 12, April 2005.
8. Jun Wang, Rui Min, **Yingwu Zhu**, and Yiming Hu, "UCFS: A User-Space, High Performance, Custom File System for Web Proxy Servers," *IEEE Transactions on Computers (TOC)*, Pp. 1056-1073, VOL. 51, NO. 9, November 2002.
9. Yansheng Lu, Xiaodong Xie, and **Yingwu Zhu**, "Network Communication Delay Model and Communication Protocol of Distributed Real-Time Database Systems," *Journal of Software*, Pp. 227-230, VOL. 9, NO. 3, 1998 (in Chinese).

Conference Papers

10. **Yingwu Zhu**, “Making Peer-to-Peer Anonymous Routing Resilient to Failures,” *Proceedings of the 21st IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, March 2007.
11. **Yingwu Zhu** and Xiaoyu Yang, “Implications of Neighbor Selection on DHT Overlays,” *Proceedings of the 14th IEEE/ACM International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)*, September 2006.
12. **Yingwu Zhu**, “Resilient P2P Anonymous Routing by Using Redundancy,” *Proceedings of International Workshop on Networking, Architecture, and Storages (IWNAS)*, August 2006.
13. **Yingwu Zhu** and Yiming Hu, “Ferry: An Architecture for Content-Based Publish/Subscribe Services on P2P Networks,” *Proceedings of the 34th International Conference on Parallel Processing (ICPP)*, June 2005. **Nominated for Best Paper Award!**
14. **Yingwu Zhu**, Xiaoyu Yang, and Yiming Hu, “Making Search Efficient on Gnutella-like P2P Systems,” *Proceedings of the 19th IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, April 2005.
15. Honghao Wang, **Yingwu Zhu**, and Yiming Hu, “To Unify Structured and Unstructured P2P Systems,” *Proceedings of the 19th IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, April 2005.
16. Honghao Wang, **Yingwu Zhu**, and Yiming Hu, “An Efficient and Secure Peer-to-Peer Overlay Network,” *Proceedings of the 30th IEEE Conference on Local Computer Networks (LCN)*, November 2005.
17. **Yingwu Zhu** and Yiming Hu, “TAP: A Novel Tunneling Approach for Anonymity in Structured P2P Systems,” *Proceedings of the 33rd International Conference on Parallel Processing (ICPP)*, August 2004.
18. **Yingwu Zhu** and Yiming Hu, “Towards Efficient Load Balancing in Structured P2P Systems,” *Proceedings of the 18th IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, April 2004.
19. **Yingwu Zhu**, Honghao Wang, and Yiming Hu, “Integrating Semantics-Based Access Mechanisms with P2P File Systems,” *Proceedings of the 3rd IEEE International Conference on Peer-to-Peer Computing*, September 2003.
20. **Yingwu Zhu** and Yiming Hu, “Efficient, Proximity-Aware Load Balancing for Structured P2P Systems,” *Proceedings of the 3rd IEEE International Conference on Peer-to-Peer Computing*, September 2003.
21. **Yingwu Zhu** and Yiming Hu, “Exploiting Client Caches: An Approach to Building Large Web Caches,” *Proceedings of the 32nd International Conference on Parallel Processing (ICPP)*, October 2003.
22. **Yingwu Zhu** and Yiming Hu, “SNARE: A Strong Security Scheme for Network-Attached Storage,” *Proceedings of the 22nd IEEE Symposium on Reliable Distributed Systems (SRDS)*, October 2003.
23. **Yingwu Zhu** and Yiming Hu, “Disk Built-in Caches: Evaluation on System Performance,” *Proceedings of the 11th IEEE/ACM International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)*, October 2003.
24. **Yingwu Zhu**, Honghao Wang, and Yiming Hu, “A Super-Peer Based Lookup in Highly Structured Peer-to-Peer Networks,” *Proceedings of the 16th International Conference on Parallel and Distributed Computing Systems (PDCS)*, August 2003.

25. **Yingwu Zhu** and Yiming Hu, "Can Large Disk Built-in Caches Really Improve System Performance?" *Proceedings of the ACM Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS)*, June 2002.
26. Zhiyong Xu, **Yingwu Zhu**, Rui Min, and Yiming Hu, "Achieving Load Balance in Distributed Storage System," *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA)*, June 2002.
27. Jun Wang, Rui Min, **Yingwu Zhu**, and Yiming Hu, "Boosting I/O Performance of Internet Servers with User-level Custom File System," *Proceedings of the 2nd Workshop of Performance and Architecture of Web Servers (PAWS)*, June 2001.

WORK IN PROGRESS:

1. **Yingwu Zhu**, "PRESS: An Approach to Efficient and Scalable Content-Based Publish/Subscribe Systems," under conference submission.
2. **Yingwu Zhu** and Yiming Hu, "Replica Maintenance in P2P Storage Systems," submitted for journal publication.

WORK EXPERIENCE:

Seattle University Seattle, WA
Tenure-Track Assistant Professor Sept. 2005 – present
 Researching, teaching, and other scholarship activities

J&A Securities Co. Ltd. Shenzhen, China
Software Engineer & Project Manager June 1997 – Aug. 2000
 Software design and development in distributed systems and networked applications

PROFESSIONAL ACTIVITIES:

2005 – Present (after joining Seattle University)

- Reviewer for ICDCS'07
- Reviewer for IEEE Communications Letters, 2007
- Program Committee in the 2007 International Conference on Embedded and Ubiquitous Computing (EUC'07)
- Program Committee and Financial/Registration co-Chair of the 2nd International Workshop on Networking, Architecture, and Storage (NAS), 2007.
- Program Committee in the International Workshop on File Systems and Storage Technologies (FSST'07) in conjunction with the International Conference on Computational Science 2007 (ICCS'07)
- Program Committee in the IEEE International Workshop on Multimedia Technology and Ubiquitous Computing (MTUC'06) in conjunction with the IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing (STUC'06)
- Reviewer for the International Workshop on File Systems and Storage Technologies (FSST'07) in conjunction with the International Conference on Computational Science 2007 (ICCS'07)
- Reviewer for the 2007 International Conference on Embedded and Ubiquitous Computing (EUC'07)
- Reviewer for JPDC (Journal of Parallel and Distributed Computing) Special Issue on Security in GRID and Distributed Computing
- Reviewer for the 11th IEEE Symposium on Computers and Communications (ISCC'06)

- Reviewer for International Journal of Network Security (IJNS)
- Reviewer for IEEE International Workshop on Multimedia Technology and Ubiquitous Computing (MTUC'06) in conjunction with the IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing (STUC'06)
- Reviewer for Journal of Supercomputing
- Reviewer for Journal of Parallel and Distributed Computing
- Reviewer for IPSI Slovenia Conference 2006

Before 2005 (Prior to Joining Seattle University)

- Reviewer for international conferences such as HPCA'02, USENIX FAST'03, ICDCS'03, and P2P'04
- Reviewer for IEEE Transactions on Computers
- Reviewer for IEEE Transactions on Parallel and Distributed Systems
- Reviewer for Journal of Parallel and Distributed Computing

UNIVERSITY SERVICE:

- Chair of Department Research Proposal Committee (Fall 2005 - present)
- Member of Department Equipment Committee (Fall 2005 - present)
- Member of Computer Science Curriculum Committee (Fall 2006 - present)

PROFESSIONAL CERTIFICATES:

- Microsoft Certified System Engineer (MCSE)
- Microsoft Certified Professional (MCP)