

Xiaolong Cui

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Education

Ph.D in Computer Science (Advisors: Dr. Taieb Znati and Dr. Rami Melhem) University of Pittsburgh (Pitt), Pittsburgh, U.S.A.	Expected July 2017 GPA: 3.89
B.Eng in Computer Science and Technology (Advisor: Dr. Chengchen Hu) Xi'an Jiaotong University (XJTU), Xi'an, China	July 2012 GPA: 3.85

Experiences & Services

Research Assitant, University of Pittsburgh Project: Scalable, energy-aware fault tolerance approach for large scale systems	May 2013 – Present
Teaching Assitant, University of Pittsburgh Courses: Computer architecture (graduate level)/Java/Python	Jan. 2013 – Dec. 2013
Paper Reviewer Journal: Transactions on Computers, Transactions on Embedded Computing Systems Conference: International Green Computing Conference.	May 2013 – present

Seleted Projects (see my *homepage* for complete list)

Scalable, energy-aware fault tolerance approach for large scale systems • Propose a scalable, energy-aware fault tolerance approach, referred to as Shadow Replication • Develop a reward based framework to predict the effectiveness of above approach	May 2013 – Present
MiniGoogle for documents indexing and searching • Design and implement a distributed and multithreaded algorithm to index and search large documents • Implement the above system with Hadoop MapReduce framework as an alternative approach	Nov. 2013 – Dec. 2013
Light weight user-level thread (LWT) scheduling system • Implement a library for thread creation, wait, sleep, and exit with priority schduling and mutex • Demonstrate the correctness of above system with producer-consumer problem	Oct. 2013
Measurement study on content distribution pattens in P2P networks • Implement BitTorrent protocol and deploy it worldwide to collect resource distribution information • Model resource sharing among PT (Private BitTorrent) sites with Generalized Assignment Problem	Feb. 2012 - June 2012

Publications

- [1] **Xiaolong Cui**, Taieb Znati, and Rami Melhem. *Lazy Shadowing: An Adaptive, Power-Aware, Resiliency Framework for Extreme-scale Computing*. [Under review]
- [2] **Xiaolong Cui**, Bryan Mills, Taieb Znati, and Rami Melhem. *Shadow Replication: An Energy-Aware, Fault-Tolerant Computational Model for Green Cloud Computing*. *Energies* 7, no. 8 (2014): 5151-5176.
- [3] **Xiaolong Cui**, Bryan Mills, Taieb Znati, and Rami Melhem. *Shadows on the Cloud: An Energy-Aware, Profit Maximizing Resilience Framework for Cloud Computing*. *CLOSER*, April 3-5, 2014.

Honors & Awards

- Dietrich School of A&S Fellow (Pitt, 2012)
- Excellent Graduate (XJTU, 2012)
- Excellent Student Leader (XJTU, 2010 + 2011)
- National Lizhi Scholarship (XJTU, 2011)