

QIAO ZHANG

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EDUCATION	University of Washington Ph.D. in Computer Science and Engineering Advisors: Tom Anderson GPA: 3.87/4.0	Seattle, WA July 2013 -
	Williams College B.A. with <i>summa cum laude in Computer Science and Physics</i> GPA: 3.99/4.0	Williamstown, MA June 2013
	California Institute of Technology Visiting student GPA: 4.0/4.0	Pasadena, CA Oct 2011 - June 2012

COURSEWORK Distributed Systems, Machine Learning, Operating Systems, Computer Graphics

INTERESTS Distributed Systems and Networking, Large-scale Machine Learning

RESEARCH **One Tunnel is Enough**

The Internet is vulnerable to outages, black holes, hijacking and denial of service. With collaborators at UW Networking lab, we design and implement an incrementally deployable yet complete solution that allows ISPs to sell reliability and security as a service to customers sending mission-critical traffic. I implemented a fault-tolerant ISP edge network in software on commodity PCs providing TaaS API to end-hosts, and deployed and evaluated the ISP performance on VICCI research cluster. Potential customers can establish circuits and route packets reliably in an end-to-end fashion through our ISP. This work is accepted at SIGCOMM 2014.

A Non-invasive Tongue Machine Interface

With collaborators at UW, I developed TongueSee, a non-intrusive tongue machine interface that can recognize a rich set of tongue gestures using electromyography signals from the surface of the skin and machine learning algorithms. I designed and tested a set of time-domain features and an anytime classification algorithm that can reliably classify six tongue gestures with an accuracy of 94.17% using data from eight EMG sensors. In addition, our preamble design achieves a low false positive probability of 0.000358 per second. This work is accepted at SIGCHI 2014.

PUBLICATIONS Danyang Zhuo, **Qiao Zhang**^a, Dan Ports, Arvind Krishnamurthy and Tom Anderson
Machine Fault Tolerance for Reliable Datacenter Systems. APSYS 2014.

Simon Peter, Umar Javed, **Qiao Zhang**, Doug Woos, Tom Anderson, and Arvind Krishnamurthy. *One Tunnel is Enough*. SIGCOMM 2014.

Qiao Zhang, Shyam Gollokota, Ben Taskar, Rajesh Rao. *A Non-invasive Tongue Machine Interface..* CHI 2014.

^afirst two authors equal in contribution

HONORS AND AWARDS	Wilma Bradley Endowed Fellowship	2013-2014
	Phi Beta Kappa	2012
	Contest in Mathematical Modeling Honorable Mention	2013
	National Mathematics Olympiad (Singapore) Silver Medal	2008
	National Physics Olympiad (Singapore) Bronze Medal	2007
WORK EXPERIENCE	Google	Mountain View, CA
	Software Engineering Intern	June - August 2014
	UW Computer Science and Engineering	Seattle, WA
	Research Assistant	July - Sept 2013
	Williams College Physics Department	Williamstown, MA
	Research Assistant	June - Aug 2012
	Cogo Labs	Cambridge, MA
	Web Development Intern	June - Aug 2011
PROGRAMMING SKILLS	Fluent in Python, C++, Java	
	Familiar with MySQL	