

Junxian Huang

Software Engineer, Platforms Group
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Employment

Software Engineer, *Platforms Group, Google*, Mountain View (August, 2013 - Present)

Education

Ph.D. Computer Science, *The University of Michigan*, Ann Arbor (August, 2008 - May, 2013)

B.S. Computer Science, *Tsinghua University*, Beijing (July, 2004 - July, 2008)

Internship

AT&T Labs Research, summer intern (May, 2012 - August, 2012)

Microsoft Research Silicon Valley, summer intern (May, 2010 - August, 2010)

Microsoft Research Asia, summer intern (June, 2007 - January, 2008)

Publications

Performance and Power Characterization of Cellular Networks and Mobile Application Optimizations.
Junxian Huang.

Ph.D. thesis 2013

An In-depth Study of LTE: Effect of Network Protocol and Application Behavior on Performance.
Junxian Huang, Feng Qian, Yihua Guo, Yuanyuan Zhou, Qiang Xu, Z. Morley Mao, Subhabrata Sen and Oliver Spatscheck.

SIGCOMM 2013

SocialWatch: Detection of Online Service Abuse via Large-Scale Social Graphs.
Junxian Huang, Yinglian Xie, Fang Yu, Qifa Ke, Martin Abadi, Eliot Gillum and Z. Morley Mao.

ASIACCS 2013

How to Reduce Smartphone Traffic Volume by 30%?
Feng Qian, Junxian Huang, Jeffrey Erman, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck.

PAM 2013, Best Paper Nominee

Screen-Off Traffic Characterization and Optimization in 3G/4G Networks.
Junxian Huang, Feng Qian, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck.

IMC 2012

Innocent by Association: Early Recognition of Legitimate Users.
Yinglian Xie, Fang Yu, Qifa Ke, Martin Abadi, Eliot Gillum, Krish Vitaldevaia, Jason Walter, Junxian Huang, and Z. Morley Mao.

CCS 2012

A Close Examination of Performance and Power Characteristics of 4G LTE Networks.
Junxian Huang, Feng Qian, Alexandre Gerber, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck.
MobiSys 2012, Best Paper Nominee

Web Caching on Smartphones: Ideal vs. Reality.
Feng Qian, Kee Shen Quah, Junxian Huang, Jeffrey Erman, Alexandre Gerber, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck.
MobiSys 2012

Periodic Transfers in Mobile Applications: Network-wide Origin, Impact, and Optimization.
Feng Qian, Zhaoguang Wang, Yudong Gao, Junxian Huang, Alexandre Gerber, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck.
WWW 2012

Cellular Data Network Infrastructure Characterization and Implication on Mobile Content Placement.
Qiang Xu, Junxian Huang, Zhaoguang Wang, Feng Qian, Alexandre Gerber, and Z. Morley Mao.
SIGMETRICS 2011

Anatomizing Application Performance Differences on Smartphones.
Junxian Huang, Qiang Xu, Birjodh Tiwana, Z. Morley Mao, Ming Zhang, and Paramvir Bahl.
MobiSys 2010, Best Paper Nominee

Deception Detection Via Blob Motion Pattern Analysis.
Fan Xia, Hong Wang, and Junxian Huang.
Affective Computing and Intelligent Interaction (ACII) 2007

Technical Reports

SocialWatch: Detection of Online Service Abuse via Large-Scale Social Graphs.
Junxian Huang, Yinglian Xie, Fang Yu, Qifa Ke, Martin Abadi, Eliot Gillum, and Z. Morley Mao.
MSR-TR-2013-24, 2013

Uncovering Cellular Network Characteristics: Performance, Infrastructure, and Policies.
Junxian Huang, Feng Qian, Qiang Xu, Zhiyun Qian, Z. Morley Mao, and Ammar Rayes.
CSE-TR-578-13, 2013

Anatomizing Application Performance Differences on Smartphones.
Junxian Huang, Qiang Xu, Z. Morley Mao, Ming Zhang, and Paramvir Bahl.
CSE-TR-556-09, 2009

Conference Talks

Screen-Off Traffic Characterization and Optimization in 3G/4G Networks.
IMC 2012 Boston, United States

A Close Examination of Performance and Power Characteristics of 4G LTE Networks.
Mobisys 2012 Lake District, United Kingdom

Anatomizing Application Performance Differences on Smartphones.
Mobisys 2010 San Francisco, United States

Honors and Awards

2011 - Runner-up of the Fall 2011 University of Michigan Mobile Apps Challenge

2011 - Winners of the **FCC Open Internet App Challenge** in `Challenge.gov`
In the categories of “Open Internet App Award” and “People’s Choice App”.
Project: “MobiPerf: Mobile Network Measurement System”
University of Michigan and Microsoft Research

2010 - Winner of Yahoo Hack U Competition in University of Michigan

2010 - Runner-up of the Spring 2010 University of Michigan Mobile Apps Challenge

2010 - MobiSys 2010 Student Travel Grant

2008 - Excellent Graduation Award

2006 - First-Class award in the Collegial Physics Competition in Beijing, China

2005 - Admitted into the Special Pivot Yao Class supervised by Turing Award winner, Prof. Andrew Chi-Chih Yao, 24 students selected campus-wise

2005 - First-Class Scholarship for Undergraduate in Tsinghua University (5 out of 160 students in the Department of Computer Science)

2004 - First-Class Scholarship for Freshman in Tsinghua University

2004 - Ranked 4th in $\sim 400,000$ examinees in National College Entrance Exam in Hubei Province, China

2003 - First-Class Prize in the National Physics Olympiad in Hubei, China

Patents

TCP Timestamps based Passive Bandwidth Estimation Technique.
Filed in 2012.

Intelligent Radio Resource Deallocation Framework Based on Inter-Burst Time (IBT) Prediction for User Equipment (UE) Energy Saving and Radio Resource Optimization for Cellular Networks.
Filed in 2012.

Screen-aware Mobile Application Optimization for Energy Saving.
Filed in 2012.

Using Social Graphs to Combat Malicious Attacks.
Publication number: **US20120246720A1**.
Published in 2012.

Teaching

Teaching Assistant in EECS 489, Computer Networks (Winter, 2011)

Miscellaneous

I have served as a reviewer for INFOCOM 2011, MC2R 2012, Transactions on Mobile Computing 2012.

I have developed iOS and Android apps that have cumulatively over 3 million users.