

Yilong GENG

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- Education**
- Ph.D.*, Electrical Engineering 9/2012–Present
Stanford University, CA
Concentration: Societal Networks, Data Center
- Bachelor of Science*, Electrical Engineering 9/2008–7/2012
Tsinghua University, Beijing, China
Major GPA: 3.99/4.00, Ranking: 2/260
- Research**
- Capri: Congestion and Parking Relief Incentives Advisor: Prof. Balaji Prabhakar
Stanford Center for Societal Networks 4/2013–Present
- Capri aims to shift people in time and space. The more that participants avoid peak times and crowded lots, the more credits they earn, increasing their opportunities to receive random rewards from Capri.
- Open Source Network Tester Advisor: Prof. Nick Mckeown
Computer Systems Lab, Stanford University 9/2012–9/2013
- Commercial network testers are closed, inflexible and expensive. We developed an open source network tester project basing on the NetFPGA platform to make customizable network testing possible.
- Map refining based on Taxi GPS Data With Dr. Peter Huang
Prof. Leo Guibas' group at Stanford University 9/2012–1/2013
- Developed an automatic method to refine and update the existing map. First extract traffic patterns from taxi GPS trajectories. Then compare the learned information with the existing map to refine and update it.
- Reconstruction of Taxi Trajectories from Sparse GPS Advisor: Prof. Lin Zhang
Complex Engineering Systems Lab, Tsinghua University 12/2010–6/2012
- Map matching is critical for navigation and city planning systems. We developed algorithms to map huge amount of real-time taxi GPS data to city street maps correctly and efficiently.
- Professional Experience**
- Internship at Google Inc.* 6/2013–9/2013
- Scalable NIC for End-Host Rate Limiting Mentor: Bob Felderman
- We developed a NIC which is capable of thousands of rate limiters, enabling accurate and scalable network bandwidth splitting.
- Internship at Microsoft Research Asia* 12/2011–6/2012
- Impact of Receiver Sensitivity in Wi-Fi Networks Mentor: Dr. Ranveer Chandra
- Investigated the impact of receiver sensitivity on the performance of 802.11b. I discovered and proved by simulation a new problem of 802.11b which would cause a severe decrease of the performance of the CSMA multi-bitrate WLANs.

Power Estimation for White Space Networks Mentor: Prof. Thomas Moscibroda

- I designed and coded the core power estimation algorithm to estimate the interference of cellular towers. This helps to decide which frequency bands are available for communication.

Publications

SENIC: Scalable NIC for End-Host Rate Limiting

Sivasankar Radhakrishnan, **Yilong Geng**, Vimalkumar Jeyakumar, Abdul Kabbani, George Porter, and Amin Vahdat To Appear In Proceedings of the 11th USENIX conference on Networked Systems Design and Implementation (NSDI'14), April 2014

Architecture for an Open Source Network Tester

Muhammad Shahbaz, Gianni Antichi, **Yilong Geng**, Noa Zilberman, Adam Covington, Marc Bruyere, Nick Feamster, Nick McKeown, Bob Felderman, Andrew W. Moore, Philippe Owezarski, 9th ACM/IEEE Symposium on Architecture for Networking and Communications Systems (ANCS), October 2013

Computer Skills & Others

Platform: NetFPGA, MiniNet, Hadoop, iOS, Android

Programming: Java, Python, C/C++/C#, Matlab

Hardware: Verilog, Xilinx Toolchain, Modelsim

Language: Mandarin Chinese, Fluent English

Hobby: Tennis, Soccer, Swimming, Video Game