# Long Gong

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## Education

**Georgia Institute of Technology**, Atlanta, GA, USA
Ph.D. in Computer Science (GPA: 3.92/4.0) 2015.8 - 20120.7

**University of Science and Technology of China**, Hefei, Anhui, China
M.Eng. in Communication and Information Systems (GPA: 3.81/4.3) 2012.9 - 2015.6
B.Eng. in Electronic Information Engineering (GPA: 3.75/4.3) 2008.9 - 2012.6

## Intern Experience

**Facebook Inc**, Menlo Park, CA, USA 2019.5 - 2019.8
Intern Mentor: Alex Eckert
Built a tool to assist fast software deployment processes for switches in large company.

**Alibaba Group (U.S.) Inc**, Bellevue, WA, USA 2018.5 - 2018.8
Intern Mentor: Gang Cheng
Built a highly scalable multi-tenant BGP tool as an important component of a high-performance and high-availability SDN based hybrid cloud network solution.

**AT&T Labs Research**, Bedminster, NJ, USA 2016.5 - 2016.7
Research Intern Mentor: He Yan and Zihui Ge
Developed tools to automate the dynamics analysis in services supported by virtualized environment.

## Projects

**Crossbar Scheduling** 2016.2 - Present

• Designed a suite of simple distributed/parallel crossbar scheduling algorithms, which can exactly or approximately emulate the linear-time centralized version (*i.e.,* SERENA) in logarithmic rounds with almost the same delay performance.

• Designed a simple yet effective "add-on" crossbar scheduling algorithm for input-queued switches, which can boost the performance (switch throughput or delay or both) of existing crossbar scheduling algorithms (*e.g.*, iSLIP and SERENA) with almost "no" computational overhead. (SIGMETRICS 2017)

• Built an efficient and flexible simulator for crossbar scheduling in input-queued switches.

**Time Capsule for Online Social Activities** 2015.9 - Present

• Designed a hybrid streaming-sampling algorithm for high accurate measurements of Online Social Networking (OSN) cascade statistics, using limited memory, which decreased the errors (measured in $\ell_2$) by more than one order of magnitude. (ICCCN 2017)

**Network Virtualization over Elastic Optical Networks** 2012.2 - 2015.6

• Proved the first inapproximability result of the location-constrained virtual network embedding (LC-VNE) problems, and designed efficient algorithms for solving LC-VNE, which achieved much better performance (in terms of both resource consumption and fairness). (IEEE/ACM Transactions on Networking)

• Built the first OpenFlow-based network virtualization platform where the underlying infrastructure is the flexible-grid elastic optical networks. (Master Thesis)

## Professional Skills

*Programming Languages:* C++ (proficient), Python (fluent), Java (prior experience)

## Professional Service

*Reviewer (***selected***):* IEEE INFOCOM 2016, IEEE Transactions on Parallel and Distributed Systems, IEEE/ACM Transactions on Networking