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Education

Georgia Institute of Technology, Atlanta, GA, USA

Ph.D. in Computer Science (GPA: 3.92/4.0)

2015.8 - 20120.8

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 Experiences

Facebook Inc, Menlo Park, CA, USA

2019.5 - 2019.8

Intern

Mentor: Alex Eckert

Built a user-friendly tool to assist fast yet robust software deployment processes for switches.

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

Set Reconciliation

2019.2 - 2020.7

- Designed a novel set reconciliation scheme that has both a low computational complexity and a low communication overhead of roughly twice the theoretical minimum. (**submitted to VLDB 2021**)

- Built an efficient benchmark tool (in C++) for set reconciliation.

Similarity Search

2019.2 - 2020.7

- Designed a new framework to Approximate Nearest Neighbor Search (ANNS), a solution based on which can have both a low index size and a low query time complexity. (VLDB 2020)

- Built an efficient benchmark tool (in C++) for ANNS in Hamming and edit distances.

Crossbar Scheduling

2016.2 - 2020.7

- Designed a series of simple distributed/parallel crossbar scheduling algorithms that are low in time complexities, yet have excellent (throughput and delay) performances. (SIGMETRICS 2017, HPSR 2020, and Valuetools 2020)

- Built an efficient and flexible simulator (in C/C++) for crossbar scheduling in input-queued switches.

Network Virtualization

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)