Long Gong

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Education

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

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

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 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 switching 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 ℓ_2) by more than one order of magnitude. (ICCCN 2017)

Selected Publications [Google Scholar]

1. **Long Gong**, Lanxi Huang, Paul Tune, Jinyoung Han, Chen-Nee Chuah, Matthew Roughan, and Jun Xu. Foreststream: Accurate measurement of cascades in online social networks. **accepted to** ICCCN 2017, 2017
2. **Long Gong**, Paul Tune, Liang Liu, Sen Yang, and Jun (Jim) Xu. Queue-Proportional Sampling: A Better Approach to Crossbar Scheduling for Input-Queued Switches. **accepted to** Sigmetrics 2017, 2017
3. **Long Gong**, Huihui Jiang, Yixiang Wang, and Zuqing Zhu. Novel Location-Constrained Virtual Network Embedding (LC-VNE) Algorithms Towards Integrated Node and Link Mapping. *IEEE/ACM Transactions on Networking*, 24(6):3648–3661, Dec. 2016
4. **Long Gong**, Yonggang Wen, Zuqing Zhu, and T. Lee. Toward Profit-Seeking Virtual Network Embedding Algorithm via Global Resource Capacity. In *IEEE International Conference on Computer Communications (INFOCOM)*, pages 1–9, Apr. 2014
5. **Long Gong** and Zuqing Zhu. Virtual Optical Network Embedding (VONE) Over Elastic Optical Networks. *Journal of Lightwave Technology*, 32(3):450–460, Feb. 2014
6. **Long Gong**, Yonggang Wen, Zuqing Zhu, and T. Lee. Revenue-driven virtual network embedding based on global resource information. In *IEEE Global Communications Conference (GLOBECOM)*, pages 2294–2299, Dec. 2013

7. **Long Gong**, Wenwen Zhao, Yonggang Wen, and Zuqing Zhu. Dynamic transparent virtual network embedding over elastic optical infrastructures. In *IEEE International Conference on Communications (ICC)*, pages 3466–3470, Jun. 2013
8. **Long Gong**, Xiang Zhou, Xiahe Liu, Wenwen Zhao, Wei Lu, and Zuqing Zhu. Efficient resource allocation for all-optical multicasting over spectrum-sliced elastic optical networks. *IEEE/OSA Journal of Optical Communications and Networking*, 5(8):836–847, Aug. 2013
9. **Long Gong**, Xiang Zhou, Wei Lu, and Zuqing Zhu. A two-population based evolutionary approach for optimizing routing, modulation and spectrum assignments (rmsa) in o-ofdm networks. *IEEE Communications Letters*, 16(9):1520–1523, Sept. 2012

Selected Talks

1. Queue-Proportional Sampling: A Better Approach to Crossbar Scheduling for Input-Queued Switches, ACM SIGMETRICS 2017, Urbana-Champaign, Illinois, USA
2. Toward Profit-Seeking Virtual Network Embedding Algorithm via Global Resource Capacity, IEEE INFOCOM 2014, Toronto, Canada
3. Revenue-Driven Virtual Network Embedding Based on Global Resource Information, IEEE GLOBECOM 2013, Atlanta, GA, USA
4. Dynamic Transparent Virtual Network Embedding over Elastic Optical Infrastructures, IEEE ICC 2013, Budapest, Hungary

Professional Skills

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

Honors and Awards

Student Travel Grant Award
ACM SIGMETRICS 2017

Excellent Graduate
University of Science and Technology of China, Hefei, Anhui, China 2015

National Scholarship (for Master Students)
University of Science and Technology of China, Hefei, Anhui, China 2013

Best Paper Award
ONS Symposium, IEEE GLOBECOM 2013 2013
ONS Symposium, IEEE ICC 2013 2013

Professional Service

Reviewer: IEEE INFOCOM 2016