YILEI LIN

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EDUCATION

Pennsylvania State University (PSU) *August 2017 - present*
Department of Computer Science and Engineering (CSE)
Ph.D. Candidate in Computer Science
Research Interest: Computer Networks, Statistical Inference, Graph Theory, Performance Analysis

University of Science and Technology of China (USTC) *August 2013 - June 2017*
Special Class for Gifted Young (SCGY)
B.S. in Information Security
Department of Information Science and Technology

TECHNICAL STRENGTHS

Computer Languages	C/C++, MATLAB, Python, Java
Software & Tools	HTML, LaTeX, MySQL, Excel, Origin

RESEARCH EXPERIENCE

Topology Inference on Queuing Network
Nov 2019 - Present

· Queuing is one of the most important parts in networks. In this work, we would like to jointly infer hop-granularity network topology and service rates of queues using end-to-end measurements.
· Advisor: Prof. Ting He

Waypoint-based Topology Inference
Jan 2019 - Oct 2019

· Due to high complexity of NFV network topology, we take a close look at the case with 1 VNF. We solve the case of 1-1-2 and connect these building blocks into 1-1-N topology. High accuracy achieved in this work.
· Advisor: Prof. Ting He

Multicast-based Weight Inference in General Network Topologies
Aug 2018 - Dec 2019

· Deal with accurate weight inference problem based on multicast end-to-end measurement on overlay topology discovery. Apply sparse approximation algorithm non-negative orthogonal matching pursuit.
· Advisor: Prof. Ting He

Inferring the Structure and State of NFV Network from External Observation
Aug 2017 - August 2018

· Infer the structure and state of the overlay formed by VNF instances, ingress/egress points of measurement flows, and critical points on their paths based on external observations such as the required service chains and the end-to-end performance measurements.
· Advisor: Prof. Ting He

Select the Most Representative Images from Classified Images
August 2016 - May 2017

· Select the most representative images for certain breed of dogs in terms of legible appearance, common color and appropriate composition.

· Advisor: Prof. Dong Liu

PUBLICATION

1. **Y. Lin**, Ting He, S. Wang, K. S. Chan and S. Pasteris, *Looking Glass of NFV: Inferring the Structure and State of NFV Network from External Observations*, 2019 International Conference on Computer Communications (INFOCOM) Acceptance rate: 19.7%

2. **Y. Lin**, Ting He, S. Wang, K. S. Chan and S. Pasteris, *Multicast-based Weight Inference in General Network Topologies*, 2019 International Conference on Communications (ICC)

3. **Y. Lin**, Ting He, S. Wang and K. S. Chan, *Waypoint-based Topology Inference*, 2020 International Conference on Communications (ICC) (accepted)

ACADEMIC RELATED ACTIVITIES

Teaching Assistant of CSE 514 Computer Networks *Fall 2019*
Pennsylvania State University, PA, USA

Presenter in International Conference on Communications (ICC) *May 2019*
Shanghai, China

Presenter in International Conference on Computer Communications (INFOCOM) *April 2019*
Paris, France

Teaching Assistant of CMPEN 362 Communication Networks *Spring 2019*
Pennsylvania State University, PA, USA

Presenter in International Technology Alliance Annual Fall Meeting *Sep 2018*
IBM US, Yorktown, NY, USA

Presenter in International Technology Alliance Meeting *Mar 2018*
IBM US, Yorktown, NY, USA

Teaching Assistant of Computer Programming A *Fall 2016*
University of Science and Technology of China, Hefei, China

Bootcamp *June 2015*
Institution of Information Engineering, CAS, Beijing, China