Gyuyeong Kim

gykim08@korea.ac.kr https://gyuyeongkim.github.io/

RESEARCH INTERESTS

Networked Systems, Data center networking, Cloud computing and networking, Dataplane programmability, Networking support for Cloud, IoT, and AI systems.

EDUCATION

1	
Advisor: Prof. Wonjun Lee	
B.E. in Brain and Cognitive Sciences, Korea University	Sept. 2009 - Feb. 2012
B.E. in Computer Science, Korea University	Mar. 2008 - Feb. 2012
Exchange Student in Lund Tekniska Högskola (LTH)	Jan. 2011 - Jun. 2011

Mar. 2012 - Feb. 2020

ACADEMIC CAREER

Research Professor in Future Network Center, **Korea University** Mar. 2020 - Present Lecturer in School of Cybersecurity, **Korea University** Sept. 2019 - Feb. 2020

RESEARCH EXPERIENCE

Intelligent and Autonomous Networking

Ph.D. in Computer Science, Korea University

• aSTEAM: App-Specialized Transport for Evolvability, Autonomicity, and Measurability, NRF, PI:*Prof. Wonjun Lee* Oct. 2018 - Present

SDN/NFV and Programmable Networking

Development of Core Technologies for Programmable Switch in Multi-Service Networks, IITP, PI: Prof. Sangheon Pack
Jan. 2017 - Present

Cloud Computing and Data Center Networking

- Cloud Bridges-Piers: Optimization Technologies towards Higher Performance of Wireless Networking Cloud, NRF, PI: Prof. Wonjun Lee Jun. 2013 - May 2016
- A Fair Network Performance Isolation Framework in Multi-Tenancy Cloud Data Center Networks, **Global Ph.D. Fellowship**, NRF Mar. 2012 Feb. 2014

JOURNAL PUBLICATIONS

- 1. Gyuyeong Kim and Wonjun Lee, "Enabling Service Queue Isolation in Multi-Tenant Data Centers," *IEEE Communications Letters* (CL), Vol. 23, No. 11, pp. 1949-1952. November 2019.
- 2. Gyuyeong Kim and Wonjun Lee, "Absorbing Microbursts without Headroom for Data Center Networks," *IEEE Communications Letters* (CL), Vol. 23, No. 5, pp. 806-809, May 2019.
- 3. Gyuyeong Kim and Wonjun Lee, "Tardy Flow Scheduling in Data Center Networks," *IEICE Transactions on Information and Systems* (Trans. Inf.&Syst.), Vol. E99-D, No. 9, pp. 2400-2403, September 2016.

CONFERENCE PUBLICATIONS

- 1. Gyuyeong Kim and Wonjun Lee, "Stable Matching with Ties for Cloud-assisted Smart TV Services," in Proc. of the 14th IEEE International Conference on Consumer Electronics (ICCE 2014), Las Vegas, NV, January 2014.
- 2. Gyuyeong Kim and Wonjun Lee, "Cannot Take My Allocation: Enforcing Fairness by Considering Demand and Payment in Clouds," in *Proc. of the 4th International Conference on Network of the Future* (NoF 2013), Pohang, South Korea, October 2013.

3. Gyuyeong Kim, Hoorin Park, Jieun Yu, and Wonjun Lee, "Virtual Machines Placement for Network Isolation in Clouds," in *Proc. of 2012 Research in Applied Computation Symposium* (RACS 2012), San Antonio, TX, October 2012.

PATENTS

- 1. Wonjun Lee and *Gyuyeong Kim*, "Method for Data Processing," *Korean Patent* 10-2064679, January 3, 2020.
- 2. Wonjun Lee and *Gyuyeong Kim*, "Method and Device for Scheduling Flow of Packet for Reducing Delay Time Due To Retransmit of Packet," *Korean Patent* 10-1841143, March 16, 2018.

AWARDS AND HONORS

IEEE Seoul Section International Student Paper Contest Bronze Paper Award 2014 - Fault Tolerant Topology Reconfiguration in Optical Wireless Data Center Networks

- T	
Global Ph.D. Fellowship (GPF), NRF, South Korea	2012 - 2014
ACM-ICPC Seoul Regional Contest 10th Place	2009
National Collegiate Programming Contest Silver Prize, South Korea	2009
Oracle JavaFX Software Contest 3rd Prize	2009
ACM-ICPC Seoul Regional Contest Honorable Mentions	2008

TEACHING EXPERIENCE

Instructor, Korea University

Computer Networks (IMS301)

Fall 2019

Teaching	Assistant.	Korea	University
reaching	Assistant.	TYULGA	OHIVEISION

Computer Networks (IMS301)	Spring 2019
Computer Networks (IMS2012)	Summer 2018
Computer Networks (IMS301)	Spring 2018
Computer Networks (IMS301)	Fall 2017
Computer Networks (CYDF316)	Fall 2016
Computer Networks (CYDF321)	Spring 2016
Computer Networks (COSE342)	Fall 2015
Communication Networks (CYDF305)	Spring 2014
Wireless Mobile Communications (CNCE407)	Spring 2013
Wireless Mobile Communications (CNCE407)	Spring 2012

TALKS

Tutorial: P4 SFC

SDN/NFV Forum P4 WG 2019 1st Meetup, Seoul, South Korea Apr. 19, 2019

Service Function Chaining in P4-enabled Programmable Switches

SDN/NFV Forum P4 WG 2018 2nd Meetup, Seoul, South Korea Oct. 12, 2018

Controller-independent Loss-aware Low Latency State Migration in Network Functions Virtualization

ONOS-P4 Brigade Work Days 2017, Seoul, South Korea Sept. 19, 2017

PROFESSIONAL Reviewer

ACTIVITIES

IEEE International Conference on Computer Communications (INFOCOM), 2020

IEEE International Conference on Distributed Computing Systems (ICDCS), 2019

IEEE Transactions on Cloud Computing, 2019

IEEE Networking Letters, 2019

WORK EXPERIENCE

Korea University Lecture Evaluation (KLUE) http://klue.kr

- An online service providing course reviews and ratings based on student feedback at Korea University. Roughly 430,000 reviews by 42,000 members are available today President Jan. 2011 - Feb. 2015

- Led our team and managed the service. Maintained the service infrastructure. ${\it Co-Founder~and~Junior~developer} \qquad \qquad {\it Mar.~2010~- Jun.~2010}$

- Designed and developed a part of the service.

REFERENCES

Wonjun Lee

Professor, School of Cybersecurity, Korea University wlee@korea.ac.kr