Gyuyeong Kim

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RESEARCH INTERESTS	Networked Systems, Data center networking, Cloud computing systems, Programmable hardware, Networking support for Cloud, IoT, and AI systems.	
EDUCATION	Ph.D. in Computer Science, Korea University <i>Thesis:</i> Buffer Sharing Mechanisms for Data Center Networks <i>Advisor:</i> Prof. Wonjun Lee	Mar. 2012 - Feb. 2020
	B.S. in Brain and Cognitive Sciences, Korea University B.S. in Computer Science, Korea University Exchange Student in Lund Tekniska Högskola (LTH)	Sept. 2009 - Feb. 2012 Mar. 2008 - Feb. 2012 Jan. 2011 - Jun. 2011
ACADEMIC CAREER	Research Professor, Future Network Center, Korea University Lecturer, School of Cybersecurity, Korea University	Mar. 2020 - Present Sept. 2019 - Feb. 2020
GRANTS	가변형 네트워크 디바이스를 활용한 인네트워크 자원 증강 기술 In-Network Resource Augmentation utilizing Reconfigurable Netv Young Research Program (신진연구지원사업), NRF,Grant: 294,00	
RESEARCH EXPERIENCE	Intelligent and Autonomous Networking • aSTEAM: App-Specialized Transport for Evolvability, Autonomicity, and Measurability, NRF, PI: Prof. Wonjun Lee Oct. 2018 - Dec. 2020	
	SDN/NFV and Programmable Networking • Development of Core Technologies for Programmable Switch works, IITP, PI: Prof. Sangheon Pack	ch in Multi-Service Net- Jan. 2017 - Dec. 2020
	Cloud Computing and Data Center Networking • Cloud Bridges-Piers: Optimization Technologies towards Highest Networking Cloud, NRF, PI: Prof. Wonjun Lee	
	• A Fair Network Performance Isolation Framework in Mul Center Networks, Global Ph.D. Fellowship , NRF	ti-Tenancy Cloud Data Mar. 2012 - Feb. 2014
TEACHING EXPERIENCE	Instructor, Korea University Computer Networks (IMS301) Computer Networks (IMS301)	2020S 2019F
	Teaching Assistant, Korea University	

2019S, 2018S, 2017F

2018(Summer)

 $2013S,\,2012S$

2016F

2016S

2015F

2014S

Computer Networks (IMS301)

Computer Networks (IMS2012)

Computer Networks (CYDF316)

Computer Networks (CYDF321)

Computer Networks (COSE342)

Communication Networks (CYDF305)

Wireless Mobile Communications (CNCE407)

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

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

CONFERENCE PUBLICATIONS

- 1. **Gyuyeong Kim** and Wonjun Lee, "Protocol-Independent Service Queue Isolation for Multi-Queue Data Centers," to appear in the 40th IEEE International Conference on Distributed Computing Systems (ICDCS 2020), Singapore, December 2020. (Acceptance rate: 17.98%=105/508)
- 2. **Gyuyeong Kim** and Wonjun Lee, "Service Function Chaining on Programmable Data Plane," to appear in the 5th International Conference On Consumer Electronics Asia, Seoul, South Korea, November 2020.
- 3. **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*, Las Vegas, NV, January 2014.
- 4. **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*, Pohang, South Korea, October 2013.
- 5. **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*, San Antonio, TX, October 2012.

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*, Vol. E99-D, No. 9, pp. 2400-2403, September 2016.

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
- Fault Tolerant Topology Reconfiguration in Optical Wireless Data Center Networks
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

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 460K+ reviews by 45K+ members are available today President Jan. 2011 - Feb. 2015

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

- Designed and developed a part of the service.

REFERENCES

Available upon request.