

Gyuyeong Kim
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<https://gyuyeongkim.github.io/>

- RESEARCH INTERESTS** Networked Systems, Data center networking, Dataplane Programmability, Networking support for Cloud, IoT, and AI systems.
- EDUCATION** Ph.D. in Computer Science, **Korea University** Mar. 2012 - Present
 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
- RESEARCH EXPERIENCE** **Intelligent and Autonomous Networking**
 • 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
- 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
- INTERNATIONAL PUBLICATIONS** 1. **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.
2. **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.
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 (ICCE 2014)*, 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 (NoF 2013), 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 (RACS 2012)*, San Antonio, TX, October 2012.

DOMESTIC PUBLICATIONS

1. **Gyuyeong Kim** and Wonjun Lee, "Programmable Switch-based Service Function Chaining," in *Proc. of the 29th Joint Conference on Communications and Information (JCCI 2019)*, Gangneung, South Korea, May 2019.
2. **Gyuyeong Kim** and Wonjun Lee, "A Low Latency Switch Buffer Management Policy for Data-intensive Applications," in *Proc. of the 28th Joint Conference on Communications and Information (JCCI 2018)*, Yeosu, South Korea, May 2018.
3. **Gyuyeong Kim** and Wonjun Lee, "Fault Tolerant Topology Reconfiguration in Optical Wireless Data Center Networks," in *Proc. of the 42nd KIISE Annual Meeting and Conference (KIISE 2015)*, Pyeongchang, South Korea, October 2015.
4. **Gyuyeong Kim** and Wonjun Lee, "Accelerating Cloud Data Center Packet Transport to Minimize Flow Completion Times," in *Proc. of the 42nd KIISE Annual Meeting and Conference (KIISE 2015)*, Pyeongchang, South Korea, October 2015.
5. **Gyuyeong Kim** and Wonjun Lee, "Strategy Proofness of VM Migration in Cloud Data Centers," in *Proc. of the 40th KIISE Annual Meeting and Conference (KIISE 2013)*, Jeju Island, South Korea, November 2013.
6. Taekyung Kim, **Gyuyeong Kim**, and Wonjun Lee, "Suitable Routing Strategy for Wireless Data Center Network," in *Proc. of the 40th KIISE Annual Meeting and Conference (KIISE 2013)*, Jeju Island, South Korea, November 2013.
7. **Gyuyeong Kim**, Taekyung Kim, and Wonjun Lee, "Fairness Enforcement by Considering Demand and Payment in Clouds," in *Proc. of Korea Computer Congress 2013 (KCC 2013)*, Yeosu, South Korea, June 2013.
8. **Gyuyeong Kim** and Wonjun Lee, "Pricing for Network Isolation in Clouds," in *Proc. of the 39th KIISE Annual Meeting and Conference (KIISE 2012)*, Daejeon, South Korea, November 2012.
9. **Gyuyeong Kim**, Jieun Yu, and Wonjun Lee, "Virtual Machines Placement Considering Network Resources in Cloud Data Center Networks," in *Proc. of the 22nd Joint Conference on Communications and Information (JCCI 2012)*, Pyeongchang, South Korea, April 2012.

PATENTS

1. 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	
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 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.
Co-Founder and Junior developer Mar. 2010 - Jun. 2010
- Designed and developed a part of the service.

**TEACHING
EXPERIENCE**

Lecturer, Korea University
Computer Networks (IMS301) Fall 2019

Teaching Assistant, Korea University
Computer Networks (IMS301) Spring 2019
Computer Networks (IMS2012) Summer 2018
Computer Networks (IMS301) Spring 2018
Computer Networks (IMS301) Fall 2017
Class 43 (CYDF316) Fall 2016
Class 53 (CYDF321) Spring 2016
Computer Networks (COSE342) Fall 2015
Class 31 (CYDF305) Spring 2014
Wireless Mobile Communications (CNCE407) Spring 2013
Wireless Mobile Communications (CNCE407) Spring 2012

REFERENCES

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