

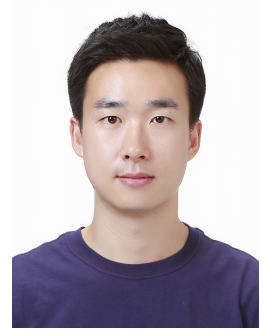
Jongyul Kim

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RESEARCH INTEREST

- **System software**
 - Distributed file system
 - Operating system
 - SmartNIC
 - Virtualization

SKILLS

- **Programming:**
 - C, C++, Java, Python, Shell
 - RDMA, Persistent memory, Virtualization, File system
- **Languages:**
 - English
 - Korean (Korean citizen)

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST)

Ph.D. Integrated master's/doctoral program in School of Computing

- Computer Architecture and Systems Laboratory
- Advisor: Seungryoul Maeng, Youngjin Kwon

Daejeon, South Korea

Mar 2013 – Feb 2022

Korea Advanced Institute of Science and Technology (KAIST)

B.S. Double-majored in Computer Science and Management Science

Daejeon, South Korea

Feb 2007 – Feb 2012

EXPERIENCE

Korea Advanced Institute of Science and Technology (KAIST)

Postdoctoral researcher at Computer Architecture and Systems Laboratory

Daejeon, South Korea

Mar 2022 – Current

Software developer/Startup co-founder

Android application developer

Seoul, South Korea

Jun 2011 - Feb 2013

TestMidas Co., Ltd

Internship

Daejeon, South Korea

Jun 2009 - Aug 2009

- Seminar on *Writing Solid Code* by Stephen A. Maguire
- *Wine* source code analysis

PUBLICATIONS

- Im, Jaeseong, **Jongyul Kim**, Youngjin Kwon, and Seungryoul Maeng. "On-demand Virtualization for Post-copy OS Migration in Bare-metal Cloud". In: *IEEE Transactions on Cloud Computing* (TCC 2022).
- Kim, Jongyul**, Insu Jang, Waleed Reda, Jaeseong Im, Marco Canini, Dejan Kostić, Youngjin Kwon, Simon Peter, and Emmett Witchel. "LineFS: Efficient SmartNIC Offload of a Distributed File System with Pipeline Parallelism". In: *13th Annual Non-Volatile Memories Workshop 2022*. (NVMW 2022).

- Kim, Jongyul**, Insu Jang, Waleed Reda, Jaeseong Im, Marco Canini, Dejan Kostić, Youngjin Kwon, Simon Peter, and Emmett Witchel. “LineFS: Efficient SmartNIC Offload of a Distributed File System with Pipeline Parallelism”. In: *Proceedings of the ACM SIGOPS 28th Symposium on Operating Systems Principles*. **Best paper awards**. (SOSP 2021).
- Anderson, Thomas E., Marco Canini, **Jongyul Kim**, Dejan Kostić, Youngjin Kwon, Simon Peter, Waleed Reda, Henry N. Schuh, and Emmett Witchel. “Assise: Performance and Availability via Client-local NVM in a Distributed File System”. In: *12th Annual Non-Volatile Memories Workshop 2021*. **Co-student author**. (NVMW 2021).
- Anderson, Thomas E., Marco Canini, **Jongyul Kim**, Dejan Kostić, Youngjin Kwon, Simon Peter, Waleed Reda, Henry N. Schuh, and Emmett Witchel. “Assise: Performance and Availability via Client-local NVM in a Distributed File System”. In: *14th USENIX Symposium on Operating Systems Design and Implementation*. **Co-student author**. (OSDI 2020).
- Im, Jaeseong, **Jongyul Kim**, Jonguk Kim, Seongwook Jin, and Seungryoul Maeng. “On-demand virtualization for live migration in bare metal cloud”. In: *Proceedings of the 2017 Symposium on Cloud Computing*. (SoCC 2017).
- Im, Jaeseong, **Jongyul Kim**, and Seungryoul Maeng. “Whole System Checkpoint-recovery Mechanism in Bare-metal In-memory System”. In: *Korea Computer Congress 2017*. (KCC 2017).

PROJECTS

Efficient and Scalable Distributed File System Leveraging Emerging HW Technology	Mar 2020 – Feb 2023
New Cloud System Design combining Virtualized Cloud and Bare-metal Cloud	Jun 2016 – May 2019
UX-oriented Mobile SW Platform	Apr 2013 – Aug 2016

AWARDS

• 2022 Spring KAIST breakthroughs (Biannual Engineering Research Webzine)	Apr 2022
• KAIST Best dissertation award	Feb 2022
• SOSP 2021 Best paper awards	Oct 2021

TEACHING

• Teaching Assistant at KAIST	
– Digital System and Lab (CS211)	Spring 2014 (Head), Spring 2015 (Head)
– Embedded Computer Systems (CS310)	Fall 2013 (Head), Fall 2014, Fall 2015
– Embedded Computing (SEP561)	Spring 2014 (Head), Spring 2015, Spring 2019
• Mentoring at KAIST	
– Jaehwan Lee	Aug 2021 - Dec 2021
– Guseul Heo	Aug 2021 - Dec 2021
– Donggeun Kim	Jan 2022 - current

ARTICLES

- “An efficient distributed file system leveraging local persistent memory.” *Communications of the Korean Institute of Information Scientists and Engineer* (Communications of KIISE July 2021) Jul 2021

INVITED TALKS

- “LineFS: Efficient SmartNIC Offload of a Distributed File System with Pipeline Parallelism”, Top conference session in *Korea Software Congress 2021* (KSC 2021). Dec 2021