

# Insu Jang

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## RESEARCH INTERESTS

System Architecture, Cloud Computing, Distributed Systems, Heterogeneous Computing, Non-Volatile Memory Systems, Serverless Computing

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## EDUCATION

- **The University of Michigan** Ann Arbor, MI, USA  
*Ph.D. Student in Computer Science and Engineering* Aug 2021 – Present  
Advisor: Dr. Mosharaf Chowdhury
- **Korea Advanced Institute of Science and Technology (KAIST)** Daejeon, Republic of Korea  
*Master of Science in Computer Science (GPA: 3.98 / 4.30)* Mar 2016 – Feb 2018  
Advisor: Dr. Jaehyuk Huh
- **Sungkyunkwan University (SKKU)** Seoul, Republic of Korea  
*Bachelor of Science in Computer Engineering (GPA: 4.24 / 4.50)* Mar 2011 – Feb 2016

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## PUBLICATIONS

1. Jongyul Kim, **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.**” *ACM Symposium on Operating Systems Principles (SOSP)*, October 2021. **Best Paper Award.**
2. **Insu Jang**, Adrian Tang, Taehoon Kim, Simha Sethumadhavan, and Jaehyuk Huh. “**Heterogeneous Isolated Execution for Commodity GPUs.**” *International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, April 2019.

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## RESEARCH EXPERIENCE

- **Research Assistant**  
*Computer Architecture and Systems Lab, KAIST (Advisor: Dr. Youngjin Kwon)* Jan 2020 – Jul 2020
- **Graduate Research Assistant**  
*Computer Architecture and Systems Lab, KAIST (Advisor: Dr. Jaehyuk Huh)* Mar 2016 – Feb 2018
- **Undergraduate Research Assistant**  
*Networking Lab, Sungkyunkwan University (Advisor: Dr. Hyunseung Choo)* May 2014 – Jul 2015
- **Undergraduate Research Assistant**  
*M2M Lab, Purdue University (Advisor: Dr. Eric T. Matson)* Jul 2014 – Aug 2014

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## PATENTS

1. **Insu Jang**, Taehoon Kim, and Jaehyuk Huh. “**Heterogeneous Isolated Execution for Commodity GPUs.**” *Republic of Korea Patent No. 10-2105760*. Filed June 19, 2018, Issued December 30, 2019.
2. **Insu Jang**, Songhee Ryu, Gyuhyeon Jeon, Hyun Lee, Myoungbeom Chung, and Hyunseung Choo. “**Data Communication Method using Inaudible Frequency Band.**” *Republic of Korea Patent No. 10-1560798*. Filed February 23, 2015, Issued October 16, 2015.

## WORK EXPERIENCE

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- **System Software Engineer**  
*TmaxSoft Inc.* Feb 2018 – Jun 2021  
Seongnam, Republic of Korea
- **Research Intern**  
*Electronics and Telecommunications Research Institute (ETRI)* Jan 2016 – Feb 2016  
Daejeon, Republic of Korea
- **Research Intern**  
*Advanced Institute of Convergence Technology (AICT)* Jul 2015 – Aug 2015  
Suwon, Republic of Korea
- **Student Member**  
*Samsung Software Membership (Student Program of Samsung Electronics)* Jan 2013 – Apr 2014  
Suwon, Republic of Korea

## HONORS AND AWARDS

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- **Best Paper Award** Oct 2021  
*“LineFS: Efficient SmartNIC Offload of a Distributed File System with Pipeline Parallelism”*  
*The 28th ACM Symposium on Operating Systems Principles (SOSP)*
- **Richard H. Orenstein Fellowship in Memory of Murray Orenstein** Aug 2021  
*Department of Electrical Engineering and Computer Science, The University of Michigan*
- **Korea National Scholarship** Mar 2016  
*KAIST and Korea Ministry of Science and ICT*
- **Korea National Scholarship for Science and Engineering** Mar 2014  
*Korea Student Aid Foundation and Korea Ministry of Education*
- **2nd Prize, 2015 Convergence App Contest** Dec 2015  
*College of Software, Sungkyunkwan University*
- **Dean’s List** Oct 2014, Apr 2015  
*Department of Computer Engineering, Sungkyunkwan University*
- **1st Prize, 2013 Smart TV App and Peripherals Contest** Nov 2013  
*Korea Association of Smart Home and Korea Ministry of Trade, Industry and Energy*
- **1st Prize, 2013 Mobile E-learning App Idea Contest** Sep 2013  
*Korea Ministry of Education*

## TECHNICAL SKILLS

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- **Languages:** C, C++14, Python, Go, Markdown,  $\text{\LaTeX}$
- **Frameworks:** CUDA, Intel SGX, Kubernetes, RDMA, Android, Ceph, Linux, QEMU, KVM

## REFERENCES

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- **Jaehyuk Huh:** Professor, KAIST. [jhhuh@kaist.ac.kr](mailto:jhhuh@kaist.ac.kr)
- **Youngjin Kwon:** Assistant Professor, KAIST. [yjkwon@kaist.ac.kr](mailto:yjkwon@kaist.ac.kr)
- **Mosharaf Chowdhury:** Morris Wellman Assistant Professor, University of Michigan. [mosharaf@umich.edu](mailto:mosharaf@umich.edu)