Jangwoong **Kim**

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Education

Sogang University *Seoul, S.Korea*
M.S. IN COMPUTER SCIENCE AND ENGINEERING *Mar. 2017 - Feb. 2019*
- Thesis: Single File Write Parallelization of a Non-Volatile Memory Filesystem using Range Locking
- Advisor: **Dr. Sungyong Park** and **Dr. Youngjae Kim**

Sogang University *Seoul, S.Korea*
B.S. IN COMPUTER SCIENCE AND ENGINEERING *Mar. 2013 - Feb. 2017*

Skills

- Decent understanding of basic CS concepts (especially in OS, system programming, comptuer architecture)
- Overall understanding of comuputer systems (pre-processing, compile, static/dynamic linking, system calls and kernel)
- Many challenging experiences in C/C++ developments
- Ability to adopt right C++ features and STLs in right circurstances based on in-depth understanding of their behaviors
- Hardware-level C skills (assembly inlining, machine code injecting)
- Experiences of low-level Linux libaraies and understanding of their internals (socket, file, shared memory, thread, synchronization, scheduler, IPC, signal)
- Decent C/C++ debugging skills
- Experiences of Linux kernel developments
- Ability to understand and write academic papers fluently, and to independently find my own research topics (especially in file systems, parallel data structures and synchronizations)

Employments

TmaxOS. Co., Ltd. *Gyeonggi-do, S.Korea*
RESEARCHER *Feb. 2019 - Present*
- Implemented some Windows APIs in Linux to run Windows binaries on TmaxOS (which is based on Linux)
- Designed and developed proxy functions to support Windows inter-process COM function calls by generating x86 machine codes in runtime
- Mediated different calling convetions of Windows and Linux by inlining x86 assemblies to guarantee correctness of memory stack
- Developed RPC server in TmaxOS from scratch which mimicks Windows' rpcss.exe

Publications

My research interest is focused on file system in persistent memory.

pNOVA: Optimizing Shared File I/O Operations of NVM File System on Manycore Servers *Hangzhou, China.*
JUNE-HYUNG KIM, **JANGWOONG KIM**, HYEONGU KANG, HANG-GYU LEE, SUNGYONG PARK, YOUNGJAE KIM *2019*
10th ACM SIGOPS Asia-Pacific Workshop on Systems (APSys), 2019.

Parallelizing a Single File Write Operation of Non-Volatile Memory File Systems. *Pyeongchang, S.Korea.*
JANGWOONG KIM, JUNE-HYUNG KIM, YOUNGJAE KIM, SUNGYONG PARK. *2018*
Korea Software Congress (KSC), 2018. [Best Paper of Computer System]

Understanding the performance of storage class memory file systems in the NUMA architecture. *Journal*
JANGWOONG KIM, AWAIS KHAN, YOUNGJAE KIM, SUNGYONG PARK. *2018*
The Journal of Networks, Software Tools and Applications (Cluster Computing), 2018.

ZonFS: A Storage Class Memory File System with Memory Zone Partitioning on Linux. *Arizona, US.*
JANGWOONG KIM, JAE-HOON KIM, AWAIS KHAN, YOUNGJAE KIM, SUNGYONG PARK. *2017*
The 5th International Workshop on Autonomic Management of Grid and Cloud Computing (AMGCC), 2017.

Awards

DOMESTIC

2018   **Best Paper of Computer System**, Korea Software Congress (KSC)   *Pyeongchang, S.Korea*

Open Source Softwares

FBBS   Futex-based User Level Blocking Synchronization