张杰

tel: +8619910031394 | email: jiez@pku.edu.cn

张杰博士生于 1990 年 10 月 20 日，现任北京大学计算机学院助理教授、特聘研究员、博士生导师，获得优秀青年科学基金海外项目（海外优青）、英特尔学术英才计划荣誉学者、ACM SIGCSE 新星奖、博雅青年学者。他长期从事存储系统和专用处理器的研究和设计，致力于从计算机体系结构层面出发，解决大数据和人工智能时代对于高性能存储系统的需求，突破冯诺依曼体系结构下数据迁移的瓶颈以及内存墙的限制。负责和参与科技部重点研发项目（课题负责人）、国家自然科学基金重点项目（北大负责人），得到华为、江波龙、三星电子、海力士、英特尔和西部数据的资助。自 2014 年起，在计算机国际会议及期刊上发表了 50 余篇论文，包括 ISCA、OSDI、 SOSP、HPCA、 MICRO、ASPLOS、FAST、ATC、DAC 和 Eurosys。**在计算机体系结构领域 35 岁以下学者中，发表顶级会议论文数排名中国第一、亚洲第二、全球第六（CSRankings，2014-2024）。亚洲历史上第三位在所有体系结构和系统顶级会议上发表论文的学者。**论文获 2019 年韩国计算机大会（KCC）最佳演讲论文奖和 2019 年非易失性内存研讨会（NVMW）优秀论文提名奖。在存储领域的研究成果被列为 KAIST50 年重大突破之一，并被四十余家新闻媒体报道。

工作经历

北京大学，北京，中国 — 助理教授，博导
计算机学院 — 2021 年 7 月–至今
KAIST, Daejeon, Korea — 博后
Electrical Engineering (Computing Division) — March 2020 年 3 月 –2021 年 5 月

教育经历

Yonsei University, Incheon, Korea — **Advisor:** Dr. Myoungsoo Jung
PhD in Engineering — August 2015 – Feb 2020
University of Texas at Dallas, Richardson, Texas — **Advisor:** Dr. Myoungsoo Jung
PhD in Computer Engineering (transfer to Korea) — August 2014 – August 2015
University of Texas at Dallas, Richardson, Texas — **Advisor:** Dr. Myoungsoo Jung
Master of Science in Electrical Engineering — August 2012 – May 2014
Nanjing University of Posts and Telecommunications, Nanjing, China
BS in Communication Engineering (computer communication) — September 2008 – July 2012

论文发表情况

2024

SOSP
CCF-A 会议
BIZA: Design of Self-Governing Block-Interface ZNS AFA for Endurance and Performance
Shushu Yi, Shaocong Sun, Li Peng, Yingbo Sun, Ming-Chang Yang, Zhichao Cao, Qiao Li, Myoungsoo Jung, Ke Zhou, ***Jie Zhang****
ACM Symposium on Operating Systems Principles

MICRO
CCF-A 会议
NeoMem: Hardware/Software Co-Design for CXL-Native Memory Tiering
Zhe Zhou, Yiqi Chen, Tao Zhang, Yang Wang, Ran Shu, Shuotao Xu, Peng Cheng, Lei Qu, Yongqiang Xiong, ***Jie Zhang****, Guangyu Sun*
The 57th Annual IEEE/ACM International Symposium on Microarchitecture

MICRO
CCF-A 会议
FlashLLM: A Chiplet-Based In-Flash Computing Architecture to Enable On-Device Inference of 70B LLM
Zhongkai Yu, Shengwen Liang, Tianyu Ma, Yunke Cai, Ziyuan Nan, Di Huang, Xinkai Song,

张杰
tel: +8619910031394 | email: jiez@pku.edu.cn

*Yifan Hao, **Jie Zhang**, Tian Zhi, Yongwei Zhao, Zidong Du, Xing Hu Qi Guo, Tianshi Chen*

The 57th Annual IEEE/ACM International Symposium on Microarchitecture

TC **Land of Oz: Resolving Orderless Writes in Zoned Namespace SSDs**

CCF-A 期刊 *Yingjia Wang, You Zhou, Fei Wu, **Jie Zhang**, Ming-Chang Yang*

IEEE Transactions on Computers

USENIX ATC **ScalaAFA: Constructing User-Space All-Flash Array Engine with Holistic Designs**

CCF-A 会议 *Shushu Yi, Xiurui Pan, Qiao Li, Qiang Li, Chenxi Wang, Bo Mao, Myoungsoo Jung, **Jie Zhang****

USENIX Annual Technical Conference

USENIX ATC **ScalaCache: Scalable User-Space Page Cache Management with Software-Hardware**

CCF-A 会议 **Coordination**

*Li Peng, Yuda An, You Zhou, Chenxi Wang, Qiao Li, Chuanning Chen, **Jie Zhang****

USENIX Annual Technical Conference

Arxiv **From RDMA to RDCA: Toward High-Speed Last Mile of Data Center Networks Using Remote Direct Cache Access**

*Qiang Li, Qiao Xiang, Derui Liu, Yuxin Wang, Haonan Qiu, Xiaoliang Wang, **Jie Zhang**, Ridi Wen, Haohao Song, Gexiao Tian, Chenyang Huang, Lulu Chen, Shaozong Liu, Yaohui Wu, Zhiwu Wu, Zicheng Luo, Yuchao Shao, Chao Han, Zongjie WU, Jianbo Dong, Zheng Cao, Jinbo WU, Jiwu Shu, Jiesheng Wu*

Arxiv

TACO **Characterizing and Optimizing LDPC Performance on 3D NAND Flash Memories**

CCF-A 期刊 *Qiao Li, Yu Chen, Guanyu Wu, Yajuan Du, Min Ye, Xinbiao Gan, **Jie Zhang**, Zhirong Shen, Jiwu Shu, Chun Jason Xue*

ACM Transactions on Architecture and Code Optimization

ISCA **Flagger: Cooperative Acceleration for Large-Scale Cross-Silo Federated Learning**

CCF-A 会议 **Aggregation**

*Xiurui Pan, Yuda An, Shengwen Liang, Bo Mao, Mingzhe Zhang, Qiao Li, Myoungsoo Jung, **Jie Zhang****

IEEE/ACM International Symposium on Computer Architecture

ASPLOS **Achieving Near-Zero Read Retry for 3D NAND Flash Memory**

CCF-A 会议 *Min Ye, Qiao Li, Yina Lv, **Jie Zhang**, Tianyu Ren, Daniel Wen, Tei-Wei Kuo, Chun Jason Xue*

ACM International Conference on Architectural Support for Programming Languages and Operating Systems

HPCA **StreamPIM: Streaming Matrix Computation in Racetrack Memory**

CCF-A 会议 *Yuda An, Yunxiao Tang, Shushu Yi, Li Peng, Xiurui Pan, Guangyu Sun, Zhaochu Luo, Qiao Li, **Jie Zhang****

IEEE International Symposium on High-Performance Computer Architecture

HPCA **BeaconGNN: Large-Scale GNN Acceleration with Asynchronous In-Storage Computing**

CCF-A 会议 *Yuyue Wang, Xiurui Pan, Yuda An, **Jie Zhang***, Glenn Reinman**

张杰
tel: +8619910031394 | email: jiez@pku.edu.cn

IEEE International Symposium on High-Performance Computer Architecture

HPCA **LearnedFTL: A Learning-based Page-level FTL for Reducing Double Reads in Flash-based SSDs**

CCF-A 会议 *Shengzhe Wang, Zihang Lin, Suzhen Wu, Hong Jiang,* ***Jie Zhang****, Bo Mao*

IEEE International Symposium on High-Performance Computer Architecture

HPCA **Midas Touch: Invalid-Data Assisted Reliability and Performance Boost for 3D High-Density Flash**

CCF-A 会议 *QiaoLi, Hongyang Dang, Zheng Wan, Congming Gao, Min Ye,* ***Jie Zhang****, Tei-Wei Kuo, Chun Jason Xue*

IEEE International Symposium on High-Performance Computer Architecture

2023

NVMW **Optimizations of Linux Software RAID System for Next-Generation Storage**

Shushu Yi, Yanning Yang, Yunxiao Tang, Zixuan Zhou, Junzhe Li, Yue Chen, Myoungsoo Jung, ***Jie Zhang****

The 14th Annual Non-volatile Memories Workshop

SAC **BcBench: Exploring Throughput Processor Designs based on Blockchain Benchmarking**

Xiurui Pan, Yue Chen, Shushu Yi, ***Jie Zhang****

The 38th ACM/SIGAPP Symposium on Applied Computing

CAL **Intelligent SSD Firmware for Zero-Overhead Journaling**

SCI 3 区 *Hanyeoreum Bae, Donghyun Gouk, Seungjun Lee, Jiseon Kim, Sungjoon Koh,* ***Jie Zhang****, Myoungsoo Jung*,*

IEEE Computer Architecture Letters (CAL)

2022

HotStorage **ScalaRAID: Optimizing Linux Software RAID System for Next-Generation Storage**

Shushu Yi, Yanning Yang, Yunxiao Tang, Zixuan Zhou, Junzhe Li, Yue Chen, Myoungsoo Jung, ***Jie Zhang****

14th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage 22)

THPC **Survey on Storage-Accelerator Data Movement**

Zixuan Zhou, Shushu Yi, ***Jie Zhang****

CCF Transaction on High Performance Computing

NVMW **Integrating New Photonic-Based Heterogeneous Memory into Throughput Accelerators**

Jie Zhang*, Myoungsoo Jung,*

The 13th Annual Non-volatile Memories Workshop

NVMW **HAMS: Hardware Automated Memory-over-Storage for Large-scale Memory Expansion**

Jie Zhang*, Miryeong Kwon, Donghyun Gouk, Sungjoon Koh, Nam Sung Kim,*

Mahmut Taylan Kandemir, Myoungsoo Jung

The 13th Annual Non-volatile Memories Workshop

2021

MICRO **Ohm-GPU: Integrating New Optical Network and Heterogeneous Memory into GPU**
CCF-A 会议 **Multi-Processors**
***Jie Zhang**, Myoungsoo Jung,*
The 54th Annual IEEE/ACM International Symposium on Microarchitecture

ISCA **Revamping Storage Class Memory with Hardware Automated Memory-Over-Storage**
CCF-A 会议 **Solution**
***Jie Zhang**, Miryeong Kwon, Donghyun Gouk, Sungjoon Koh, Nam Sung Kim,*
Mahmut Kandemir, Myoungsoo Jung,
The IEEE/ACM International Symposium on Computer Architecture

NVMW **Architecting Throughput Processors with New Flash**
***Jie Zhang**, Myoungsoo Jung,*
The 12th Annual Non-volatile Memories Workshop

NVMW **DRAM-less Accelerator for Energy Efficient Data Processing**
***Jie Zhang**, Gyuyoung Park, David Donofrio, John Shalf, Myoungsoo Jung*
The 12th Annual Non-volatile Memories Workshop

NVMW **Manycore-Based Scalable SSD Architecture Towards One and More Million IOPS**
***Jie Zhang**, Miryeong Kwon, Michael Swift, Myoungsoo Jung,*
The 12th Annual Non-volatile Memories Workshop

2020

ISCA **ZnG: Architecting GPU Multi-Processors with New Flash for Scalable Data Analysis**
CCF-A 会议 ***Jie Zhang**, Myoungsoo Jung,*
The IEEE/ACM International Symposium on Computer Architecture

FAST **Scalable Parallel Flash Firmware for Many-core Architectures**
CCF-A 会议 ***Jie Zhang**, Miryeong Kwon, Michael Swift, Myoungsoo Jung,*
The 18th USENIX Conference on File and Storage Technologies

HPCA **DRAM-less: Hardware Acceleration of Data Processing with New Memory**
CCF-A 会议 ***Jie Zhang**, Gyuyoung Park, David Donofrio, John Shalf, Myoungsoo Jung*
26th IEEE International Symposium on High-Performance Computer Architecture

ISPASS **Data Direct I/O Characterization for Future I/O System Exploration**
CCF-C 会议 *Mohammad Alian, Yifan Yuan, **Jie Zhang**, Ren Wang, Myoungsoo Jung, Nam Sung Kim*
The IEEE International Symposium on Performance Analysis of Systems and Software

CAL **FastDrain: Removing Page Victimization Overheads in NVMe Storage Stack**
SCI-3 区 ***Jie Zhang**, Miryeong Kwon, Sanghyun Han, Nam Sung Kim, Mahmut Kandemir and*

Myoungsoo Jung

IEEE Computer Architecture Letters (CAL)

2019

HPCA
CCF-A 会议

FUSE: Fusing STT-MRAM into GPUs to Alleviate Off-Chip Memory Access Overheads

***Jie Zhang**, Myoungsoo Jung, Mahmut Kandemir,*

25th IEEE International Symposium on High-Performance Computer Architecture

IISWC

Faster than Flash: An In-Depth Study of System Challenges for Emerging Ultra-Low Latency SSDs

*Sungjoon Koh, Junkyeok Jang, Changrim Lee, Miryeong Kwon, **Jie Zhang**, Myoungsoo Jung,*

The 2019 IEEE International Symposium on Workload Characterization

DAC
CCF-A 会议

FlashGPU: Placing New Flash Next to GPU Cores

***Jie Zhang**, Miryeong Kwon, Hyojong Kim, Hyesoon Kim, Myoungsoo Jung,*

The 56th Design Automation Conference (DAC)

TPDS
CCF-A 期刊

Exploring Fault-Tolerant Erasure Codes for Scalable All-Flash Array Clusters

*Sungjoon Koh, **Jie Zhang**, Miryeong Kwon, Jungyeon Yoon, David Donofrio, Nam Sung Kim, Myoungsoo Jung,*

IEEE Transactions on Parallel and Distributed Systems (TPDS)

NVMW

Addressing Fast-Detrapping for Reliable 3D NAND Flash Design

*Mustafa Shihab, **Jie Zhang**, Myoungsoo Jung, Mahmut Kandemir,*

10th Annual Non-Volatile Memories Workshop -- Nominated as Memorable Paper Award

KCC

Maximizing GPU Cache Utilization with Adjustable Cache Line Management

***Jie Zhang**, Myoungsoo Jung,*

Korean Computer Congress (KCC), 2019 -- Nominated as Excellent Paper Award

2018

OSDI
CCF-A 会议

FlashShare: Punching Through Server Storage Stack from Kernel to Firmware for Ultra-Low Latency SSDs

***Jie Zhang**, Miryeong Kwon, Donghyun Gouk, Changlim Lee, Mohammad Alian, Myoungjun Chun, Mahmut Kandemir, Nam Sung Kim, Jihong Kim, Myoungsoo Jung,*

13th USENIX Symposium on Operating Systems Design and Implementation

MICRO
CCF-A 会议

Amber: Enabling Precise Full-System Simulation with Detailed Modeling of All SSD Resources

*Donghyun Gouk, Miryeong Kwon, **Jie Zhang**, Sungjoon Koh, Wonil Choi, Nam Sung Kim, Mahmut Kandemir, Myoungsoo Jung,*

The 51st Annual IEEE/ACM International Symposium on Microarchitecture

张杰
tel: +8619910031394 | email: jiez@pku.edu.cn

TACO **ReveNAND: A Fast-Drift Aware Resilient 3D NAND Flash Design**

CCF-B 期刊 *Mustafa Shihab, **Jie Zhang**, Myoungsoo Jung, Mahmut Kandemir,*

ACM Transactions on Architecture and Code Optimization (TACO), 2018

Eurosys **FlashAbacus: A Self-governing Flash-based Accelerator for Low-power Systems**

CCF-A 会议 *__Jie Zhang__, Myoungsoo Jung,*

The European Conference on Computer Systems (EuroSys), 2018

IPDPS **CIAO: Cache Interference-Aware Throughput-Oriented Architecture and Scheduling for GPUs**

CCF-B 会议

__Jie Zhang__, Shuwen Gao, Nam Sung Kim, Myoungsoo Jung,

32nd IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2018

2017

CAL **SimpleSSD: Modeling Solid State Drive for Holistic System Simulation**

SCI-3 区 *Myoungsoo Jung, __Jie Zhang__, Ahmed Abulila, Miryeong Kwon, Narges Shahidi, John Shalf, Nam Sung Kim and Mahmut Kandemir,*

IEEE Computer Architecture Letters (CAL), 2017

IISWC **Understanding System Characteristics of Online Erasure Coding on Scalable, Distributed and Large-Scale SSD Array Systems**

Sungjoon Koh, __Jie Zhang__, Miryeong Kwon, Jungyeon Yoon, David Donofrio, Nam Sung Kim, Myoungsoo Jung,

IEEE International Symposium on Workload Characterization (IISWC), 2017

IISWC **TraceTracker: Hardware/Software Co-Evaluation for Large-Scale I/O Workload Reconstruction**

Miryeong Kwon, __Jie Zhang__, Gyuyoung Park, Wonil Choi, David Donofrio, John Shalf, Mahmut Kandemir, Myoungsoo Jung,

IEEE International Symposium on Workload Characterization (IISWC), 2017

NPC **An In-depth Performance Analysis of Many-Integrated Core for Communication Efficient Heterogeneous Computing**

CCF-C 会议

__Jie Zhang__, Myoungsoo Jung,

IFIP International Conference on Network and Parallel Computing (NPC), 2017

NPC/IJPP **Enabling Realistic Logical Device Interface and Driver for NVM Express Enabled Full System Simulations**

CCF-C 会议

Donghyun Gouk, __Jie Zhang__, Myoungsoo Jung,

IFIP International Conference on Network and Parallel Computing (NPC) and Invited for International Journal of Parallel Programming (IJPP), 2017

张杰

tel: +8619910031394 | email: jiez@pku.edu.cn

2016

HPCA **DUANG: Fast and Lightweight Page Migration in Asymmetric Memory Systems**

CCF-A 会议 *Hao Wang, **Jie Zhang**, Gieseo Park, Sharmila Shridhar, Myoungsoo Jung, Nam Sung Kim,*

IEEE Symposium on High Performance Computer Architecture (HPCA), 2016

ASBD **A Study for Block-level I/O Trace Reconstruction on All-Flash Arrays**

*Miryeong Kwon, **Jie Zhang**, Gyuyoung Park, Myoungsoo Jung,*

Workshop on Architectures and Systems for Big Data (ASBD@ISCA), 2016

NVMSA **An In-Depth Study of Next Generation Interface for Emerging Non-Volatile Memories**

*Wonil Choi, **Jie Zhang**, Shuwen Gao, Jaesoo Lee, Myoungsoo Jung, Mahmut Kandemir,*

IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA), 2016

INFLOW **ROSS: A Design of Read-Oriented STT-MRAM Storage for Energy-Efficient Non-Uniform Cache Architecture**

Jie Zhang, Miryeong Kwon, Chanyoung Park, Myoungsoo Jung, Songkuk Kim,

USENIX Workshop on Interactions of NVM/Flash with Operating Systems and Workloads

INFLOW **Couture: Tailoring STT-MRAM for Persistent Main Memory**

*Mustafa Shihab, **Jie Zhang**, Shuwen Gao, Josep Sloan, Myoungsoo Jung,*

USENIX Workshop on Interactions of NVM/Flash with Operating Systems and Workloads

2015

ASBD **CoDEN: A Hardware/Software CoDesign Emulation Platform for SSD-Accelerated Near Data Processing**

***Jie Zhang**, Damian Szmulewicz, Erick Macias, Myoungsoo Jung,*

The 5th Workshop on Architecture and System for Big Data (ASBD), 2015

PACT **NVMMU: Direct Solid State Disk Access for GPU-Accelerated Data Processing**

CCF-B 会议 *__Jie Zhang__, David Donofrio, John Shalf, Myoungsoo Jung,*

The 24th International Conference on Parallel Architecture and Compilation Techniques

ICCD **OpenNVM: An Open-Sourced FPGA-based NVM Controller for Low Level Memory Characterization**

CCF-B 会议 *__Jie Zhang__, Gieseo Park, David Donofrio, Mustafa Shihab, John Shalf and Myoungsoo Jung,*

The 33rd International Conference on Computer Design (ICCD), 2015

PACT-SRC **Integrating 3D Resisteive Memory Cache into GPGPU for Energy-Efficient Data Processing**

***Jie Zhang**, David Donofrio, John Shalf and Myoungsoo Jung,*

International Conference on parallel Architecture and Compilation Techniques (PACT) – ACM SRC 2nd Runner Award, 2015

FAST-WiP **Shared Non-Volatile Mmeory Cache for Energy-Efficient High Throughput GPU Computing**

***Jie Zhang** and Myoungsoo Jung,*

张杰

tel: +8619910031394 | email: jiez@pku.edu.cn

USENIX Conference on File and Storage Technologies Working in Progress (FAST WiP), 2015

2014

HotStorage **Power, Energy, and Thermal Considerations in SSD-Based I/O Acceleration**

***Jie Zhang**, Myoungsoo Jung,*

6th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage 14), 2014

专利发表情况

- "Memory controlling device and computing device including the same", Myoungsoo Jung, Donghyun Gouk, Miryeong Kwon, Sungjoon Koh, Jie Zhang, America (US20190171566A1)
- "Flash-based accelerator and computing device including the same", Myoungsoo Jung, Jie Zhang, America (US10824341B2, US20180321859, US20170285968)
- "基于闪存的加速器和包含其的计算设备", Myoungsoo Jung, Jie Zhang, China (CN107291424)
- "基于闪存的加速器及包括该加速器的计算设备", Myoungsoo Jung, Jie Zhang, China (CN109460369)
- "Resistance switching memory-based accelerator", Myoungsoo Jung, Gyuyoung PARK, Jie Zhang, America (US20180321880A1)
- "PARALLEL PROCESSING UNIT, COMPUTING DEVICE INCLUDING THE SAME, AND THREAD SCHEDULING METHOD", Jie Zhang, Myoungsoo Jung, America (WO2018021620)
- "MEMORY CONTROL APPARATUS AND COMPUTING DEVICE INCLUDING SAME", JUNG MYOUNGSOO, GOUK DONGHYUN, KWON MIRYEONG, KOH SUNGJOON, 정명수, JIE ZHANG, 국동현, 권미령, 고성준 장지에, Korea (KR1020180126267)
- "COMPUTING DEVICE, METHOD OF PROCESSING INPUT/OUTPUT REQUEST, AND RECORDING MEDIUM", Jie Zhang, Myoungsoo Jung, Donghyun Gouk, Miryeong Kwon, Sungjoon Koh, America (pending)
- "FLASH-BASED COPROCESSOR", Jie Zhang, Myoungsoo Jung, America (pending)
- "FLASH STORAGE DEVICE AND METHOD OF SCHEDULING PAGE VICTIMIZATION", Jie Zhang, Myoungsoo Jung, America (pending)

研究经历

Research Assistant, Computer Architecture and Memory System Lab **2013 年 9 月 – 2021 年 5 月**

- Cache and memory system optimization in GPGPU and multi-core system.
- Non-volatile memory (including Spin-transfer torque magnetic random-access memory and Phase Change Random Access Memory) characterization and optimization.
- Performance, power and thermal optimizations of Solid State Disk (SSD).

学术活动情况

Journal Paper Review/Sub-review

- IEEE Transactions on Computer
- ACM Transactions on Storage
- ACM Transactions on Architecture and Code Optimization
- ACM Transactions on Computer Systems
- IEEE Transactions on Parallel and Distributed Systems
- IEEE Computer Architecture Letters
- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems

张杰

tel: +8619910031394 | email: jiez@pku.edu.cn

Conference Paper Review/Sub-review

- MICRO’24’18 ’16
- ISCA’24
- HPCA’25’24’18 ’16
- USENIX ATC’23
- ChinaSys’24’22
- SAC’22
- HotStorage’20
- DAC’20 ’19
- NVMSA’17 ’16
- ICCD’19 ’18 ’17 ’15
- IPDPS’18 ’16
- DATE’19
- ASPLOS’19 ’18 ’17

演讲情况

- Invited talk, “ZnG: Architecting GPU Multi-Processors with New Flash for Scalable Data Analysis”, Intel Computational Storage Lab, 2020
- Presentation, “ZnG: Architecting GPU Multi-Processors with New Flash for Scalable Data Analysis”, ISCA, online, 2020
- Presentation, “DRAM-less: Hardware Acceleration of Data Processing with New Memory”, HPCA, San Diego, CA, 2020
- Presentation, “Scalable Parallel Flash Firmware for Many-core Architectures”, FAST, Santa Clara, CA, 2020
- Presentation, “FUSE: Fusing STT-MRAM into GPUs to Alleviate Off-Chip Memory Access Overheads”, HPCA, Washington DC, 2019
- Presentation, “FlashGPU: Placing New Flash Next to GPU Cores”, DAC, Las Vegas, NV, 2019
- Presentation, “Maximizing GPU Cache Utilization with Adjustable Cache Line Management”, Jeju, South Korea, 2019
- Presentation, “FlashShare: Punching Through Server Storage Stack from Kernel to Firmware for Ultra-Low Latency SSDs”, OSDI, Carlsbad, CA, 2018
- Presentation, “FlashAbacus: A Self-governing Flash-based Accelerator for Low-power Systems”, Eurosys, Porto, Portugal, 2018
- Presentation, “CIAO: Cache Interference-Aware Throughput-Oriented Architecture and Scheduling for GPUs”, IPDPS, Vancouver, Canada, 2018
- Presentation, “An In-depth Performance Analysis of Many-Integrated Core for Communication Efficient Heterogeneous Computing”, NPC, Anhui, China, 2017
- Presentation, “ROSS: A Design of Read-Oriented STT-MRAM Storage for Energy-Efficient Non-Uniform Cache Architecture”, Inflow, Savannah, GA, 2016
- Presentation, “Couture: Tailoring STT-MRAM for Persistent Main Memory”, Inflow, Savannah, GA, 2016
- Presentation, “CoDEN: A Hardware/Software CoDesign Emulation Platform for SSD-Accelerated Near Data Processing”, ASBD, Portland, OR, 2015
- Presentation, “NVMMU: Direct Solid State Disk Access for GPU-Accelerated Data Processing”, PACT, San Francisco, CA, 2015
- Presentation, “Integrating 3D Resistive Memory Cache into GPGPU for Energy-Efficient Data Processing”, PACT SRC, San Francisco, CA, 2015

张杰

tel: +8619910031394 | email: jiez@pku.edu.cn

- Presentation, “OpenNVM: An Open-Sourced FPGA-based NVM Controller for Low Level Memory Characterization”, ICCD, New York city, NY, 2015
- Presentation, “Shared Non-Volatile Memory Cache for Energy-Efficient High Throughput GPU Computing”, FAST WiP, Santa Clara, CA, 2015
- Presentation, “Power, Energy, and Thermal Considerations in SSD-Based I/O Acceleration”, HotStorage, Philadelphia, PA, 2014

教学经历

- Computer Architecture (Fall’22)
- Introduction of Computer System (Fall’22)
- IIT 3002 Operating Systems (Fall’15, Fall’16)
- IIT 6036 Computer Organization and Design (Fall’15, Fall’16)
- IIT 7024 Advanced System Architecture (Spring’16)

获奖情况

- 2023: 英特尔学术英才计划荣誉学者
- 2022: ACM SIGCSE 新星奖
- 2021: Our storage-class memory research is selected as KAIST breakthrough 50 years
- 2020-2021: Korean BK21+ Scholarship
- 2020: HPCA travel grant
- 2019: Annual Non-Volatile Memories Workshop (NVMW) -- Nominated as Memorable Paper Award
- 2019: Korea Computer Congress (KCC) -- Best Presentation Paper Award
- 2018: OSDI travel grant
- 2015: ACM Student Research Competition 2nd Runner Award