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Contact Information

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Research Interests

- Microprocessor architectures, GPU architectures, and machine learning accelerators
 - Parallel and multi-threaded architectures and parallel processing
 - Memory hierarchy, processing-in-memory, and transactional memory
 - System software optimization, virtualization, and parallel processing
 - Quantum computing and software support for quantum algorithm development
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Education

- *Ph.D. in Electrical Engineering* (2004), University of Southern California, Los Angeles, California (Dissertation: Decoupled Memory Access Architectures with Speculative Pre-Execution, Advisor: Jean-Luc Gaudiot)
 - *M.S. in Electrical Engineering* (1999), University of Southern California, Los Angeles, California
 - *B.S. in Electrical Engineering* (1996), Yonsei University, Seoul, Republic of Korea
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Work Experience

- *Professor* – School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea (2017 – present)
- *Associate Professor* – School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea (2012 – 2017)
- *Assistant Professor* – School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea (2007 – 2012)
- *Visiting Scholar* – Department of Electrical Engineering, University of Southern California (Murali Annavaram), Los Angeles, California (2014 – 2015)
- *Assistant Professor* – Department of Electrical and Computer Engineering, California State University, Northridge, California (2004 – 2007)
- *Software Engineer* – ARM Inc., Irvine, California (2006 – 2007)
- *Assistant Specialist* – Department of Electrical Engineering and Computer Science, University of California, Irvine, CA, U.S.A. (2004)
- *Intern* – Apple Inc., Cupertino, California (2003 – 2004)
- *Teaching Assistant* – University of Southern California, Los Angeles, California (1999 – 2000)
- *System Engineer* – IBM Korea, Seoul, Republic of Korea (1996 – 1997)

Professional Activities

- Senior Member, IEEE Computer Society (2016.5 - present)
- Associate Editor, ACM Transactions on Computer Systems (2026.1 – Present)
- Associate Editor, IEEE Computer Architecture Letters (2025.1 – Present)
- Associate Editor, IEEE Transactions on Emerging Topics in Computing (2021.1 – 2025.12)
- Associate Editor, IEEE Transactions on Computers (2014.1 – 2018.12)
- Vice President, The Institute of Electronics and Information Engineers (2022.1 – Present)
- Founding Member, IEEE Computer Society STC Parallel Model and System: Dataflow and Beyond (2016 – present)
- ACM SIGARCH Korea Chapter, Chair (2017.4 – 2018.4)
- ACM SIGARCH Korea Chapter, Vice Chair (2016 – 2017.3)
- Advisory Board Member, National Assembly Library, Republic of Korea
- General Chair, The 58th IEEE/ACM International Symposium on Microarchitecture (Micro 2025)
- Organizing Committee Chair, The 23rd International Conference on Electronics, Information, and Communication (ICEIC 2024)
- Program Committee, IEEE International Symposium on High-Performance Computer Architecture 2024
- Program Committee, IEEE/ACM International Symposium on Microarchitecture 2023
- Program Committee Chair, IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS 2022)
- General Chair, IEEE International Conference on Consumer Electronics Asia (ICCE-Asia 2021)
- Organizing Committee Chair, IEEE International Conference on Consumer Electronics Asia (ICCE-Asia 2020)
- Sponsorship Chair, IEEE International Symposium on High-Performance Computer Architecture 2022
- Sponsorship Chair, IEEE International Symposium on High-Performance Computer Architecture 2021
- Program Committee, IEEE International Symposium on High-Performance Computer Architecture 2021
- Program Committee, Design Automation Conference, 2021
- Program Committee, Design Automation Conference, 2020
- External Review Committee, IEEE/ACM International Symposium on Microarchitecture 2019
- External Review Committee, IEEE International Symposium on High-Performance Computer Architecture 2018
- Program Committee Chair, IEEE International Symposium on Embedded Multicore/Many-Core Systems-on-Chip (MCSoc-17)
- External Review Committee, IEEE/ACM International Symposium on Microarchitecture 2017
- External Program Committee, IEEE/ACM International Symposium on Computer Architecture 2017
- External Review Committee, IEEE/ACM International Symposium on Microarchitecture 2016
- External Review Committee, IEEE International Symposium on High-Performance Computer Architecture 2016

- Program Committee, IEEE International Parallel and Distributed Processing Symposium (IPDPS 2015)
- Program Committee, IEEE International Conference on High Performance Computing (HiPC 2014)
- Program Committee, The 19th IEEE International Conference on Parallel and Distributed Systems (ICPADS 2013)
- Finance Chair, The 54th IEEE International Midwest Symposium on Circuits and Systems (2011)
- Publicity Chair, The 4th IEEE International Conference on Ubi-media Computing (U-Media'2011)
- Publicity Chair, The 2010 IET International Conference on Frontier Computing - Theory, Technologies and Applications (2010)
- Board Member, KIPS
- Board Member, Computer System Society, KIISE
- Business Director (2019), Finance Director (2018), General Affair Director (2017), IEIE

Awards / Honors

- IEIE Research Pioneer Award (Nov. 2020)
 - IITP President Award (Nov. 2019)
 - Outstanding Teaching Award, Yonsei University (Feb. 2019)
 - Achievement Award, IEIE (2018)
 - Korea Semiconductor Industry Association Chairman Award (Oct. 2018)
 - Teaching Award, IC Design Education Center (IDEC), KAIST, Korea (July. 2018)
 - Outstanding Professor Award in Research, Yonsei University (Feb. 2017)
 - LG Academic-Industrial Cooperation Award (Mar. 2014)
 - Outstanding Teaching Award, Yonsei University (Feb. 2014)
 - Outstanding Teaching Award, Yonsei University (Feb. 2013)
 - Outstanding Teaching Award, Yonsei University (Feb. 2012)
 - Outstanding Teaching Award, Yonsei University (Feb. 2011)
 - Outstanding Teaching Award, Yonsei University (Feb. 2010)
 - Outstanding Teaching Award for Lectures in English, Yonsei University (Dec. 2009)
 - Outstanding Professor Award in the Area of Engineering Education, Yonsei University (Feb. 2009)
 - Achievement Award, IEIE (2010)
 - Achievement Award, IEIE (2009)
 - Certificate of Appreciation, CSUN IEEE Student Branch (2007)
 - CSUN Faculty Research and Creative Activity Awards, California State University, Northridge (2006)
 - The Probationary Faculty Support Program Awards, California State University, Northridge (2006)
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Book Chapters

- [B3] Won Jeon, Gun Ko, Jiwon Lee, Hyunwuk Lee, Dongho Ha, and Won Woo Ro, “Deep learning with GPUs,” chapter in “*Hardware Accelerator Systems for Artificial Intelligence and Machine Learning, a volume of “Advance in Computers,”* edited by Shiho Kim and Ganesh Chandra Deka, Elsevier, 2021
 - [B2] Jaeyoung Yi, Yong J. Jang, Doohwan Oh, and Won Woo Ro, “Programmability and Scalability on Multi-Core Architectures,” chapter in “*Handbook of Research on Scalable Computing Technologies*”, edited by Kuan-Ching Li, Ching-Hsien Hsu, Laurence Tianruo Yang, Jack Dongarra, and Hans Zima, Information Science Reference, 2009
 - [B1] Jean-Luc Gaudiot, Jung-Yup Kang, and Won Woo Ro, “Techniques to Improve Performance Beyond Pipelining: Superpipelining, Superscalar, and VLIW,” chapter in “*Computer Architecture, a volume of “Advance in Computers,”* edited by Ali R. Hurson, Elsevier, 2005
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Conference Publications (Selected)

- [C90] Changheon Lee, Hyungseok Kim, Seungwoo Choi, Youngmin Kim, and Won Woo Ro, “d’ArQ: A QOC Framework with Causality-Aware Grouping and Basis Selection,” in *The 32nd IEEE International Symposium on High Performance Computer Architecture (HPCA 2026)*
- [C89] Enhyeok Jang, Hyungseok Kim, Yongju Lee, Jaewon Kwon, Yipeng Huang, and Won Woo Ro, “Toward Scalable Gate-Level Parallelism on Trapped-Ion Processors with Racetrack Electrodes,” in *The 32nd IEEE International Symposium on High Performance Computer Architecture (HPCA 2026)*
- [C88] Mincheol Park, Heeji Won, Won Woo Ro, and Suhyun Kim, “Rethinking Entropy in Test-Time Adaptation: The Missing Piece from Energy Duality,” in *The 39th Annual Conference on Neural Information Processing Systems (NeurIPS 2025)*
- [C87] Junsung Kim, Sungwoo Kim, Seunghyun Jin, and Won Woo Ro, “PIMFY: Eliminating Remote Page Walks in MCM GPUs,” in *The 43rd International Conference on Computer Design (ICCD 2025)*
- [C86] Yeonan Ha, Jiho Park, Hanna Cha, Jiwon Lee, Joonsung Kim, Won Woo Ro, and Youngsok Kim, “LATPC: Accelerating GPU Address Translation Using Locality-Aware TLB Prefetching and MSHR Compression,” in *The 58th International Symposium on Microarchitecture (MICRO 2025)*
- [C85] Seunghyun Lee, Dongho Ha, Sungbin Kim, Sungwoo Kim, Hyunwuk Lee, and Won Woo Ro, “BitL: A Hybrid Bit-Serial and Parallel Deep Learning Accelerator for Critical Path Reduction,” in *The 58th International Symposium on Microarchitecture (MICRO 2025)*
- [C84] Mincheol Park, Cheonjun Park, Seungseop Lim, Mijin Koo, Hyunwuk Lee, Won Woo Ro, and Suhyun Kim, “Adversarial Purification via Super-Resolution and Diffusion,” in *The IEEE/CVF International Conference on Computer Vision (ICCV 2025)*
- [C83] Cheonjun Park, Hyun Jae Oh, Mincheol Park, Hyunchan Moon, Minsik Kim, Suhyun Kim, Myung Kuk Yoon, and Won Woo Ro, “WINS: Winograd Structured Pruning for Fast Winograd Convolution,” in *The IEEE/CVF International Conference on Computer Vision (ICCV 2025)*
- [C82] Hyungseok Kim, Enhyeok Jang, Seungwoo Choi, Youngmin Kim, and Won Woo Ro, “QR-Map: A Map-Based Approach to Quantum Circuit Abstraction for Qubit Reuse Optimization,” in *The 52nd International Symposium on Computer Architecture (ISCA 2025)*
- [C81] Yuan Feng, Yuke Li, Jiwon Lee, Won Woo Ro, and Hyeran Jeon, “Heliostat: Harnessing Ray Tracing Accelerators for Page Table Walks,” in *The 52nd International Symposium on Computer Architecture (ISCA 2025)*
- [C80] Minseong Gil, Dongho Ha, Simla Burcu Harma, Myung Kuk Yoon, Babak Falsafi, Won Woo Ro, and Yunho Oh, “Avant-Garde: Empowering GPUs with Scaled Numeric Formats,” in *The 52nd International Symposium on Computer Architecture (ISCA 2025)*

- [C79] Jaewon Kwon, Yongju Lee, Jiwan Kim, Enhyeok Jang, Hongju Kal, and Won Woo Ro, “Garibaldi: A Pairwise Instruction-Data Management Scheme for Enhancing Shared Last-Level Cache Performance in Server Workloads,” in *The 52nd International Symposium on Computer Architecture (ISCA 2025)*
- [C78] Yongju Lee, Jaewon Kwon, Cheolhwan Kim, Enhyeok Jang, Jiwon Lee, Hyunwuk Lee, and Won Woo Ro, “COSMOS: An LLC Contention Slowdown Model for Heterogeneous Multi-core Systems,” in *The 2025 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS 2025)*
- [C77] Hyunwuk Lee, Sungbin Kim, Sungwoo Kim, and Won Woo Ro, “CVMAX: Accelerator Architecture with Polar Form Multiplication for Complex-Valued Neural Networks,” in *The 62nd Design Automation Conference (DAC 2025)*
- [C76] Sungbin Kim, Hyunwuk Lee, Wonho Cho, Mincheol Park, and Won Woo Ro, “Ditto: Accelerating Diffusion Model via Temporal Value Similarity,” in *The 31st IEEE International Symposium on High Performance Computer Architecture (HPCA 2025)*
- [C75] Jiwon Lee, Gun Ko, Myung Kuk Yoon, Ipoom Jeong, Yunho Oh, and Won Woo Ro, “Marching Page Walks: Batching and Concurrent Page Table Walks for Enhancing GPU Throughput,” in *The 31st IEEE International Symposium on High Performance Computer Architecture (HPCA 2025)*
- [C74] Enhyeok Jang, Youngmin Kim, Hyungseok Kim, Seungwoo Choi, Yipeng Huang, and Won Woo Ro, “Qubit Movement-Optimized Program Generation on Zoned Neutral Atom Processors,” in *The IEEE/ACM International Symposium on Code Generation and Optimization (CGO 2025)*
- [C73] Cheonjun Park, Mincheol Park, Hyunchan Moon, Myung Kuk Yoon, Seokjin Go, Suhyun Kim, and Won Woo Ro, “DEPrune: Depth-wise Separable Convolution Pruning for Maximizing GPU Parallelism,” in *The 38th Annual Conference on Neural Information Processing Systems (NeurIPS 2024)*
- [C72] Sungbin Kim, Hyunwuk Lee, Sungwoo Kim, Cheolhwan Kim, and Won Woo Ro, “AirGun: Adaptive Granularity Quantization for Accelerating Large Language Models,” in *The International Conference on Computer Design (ICCD 2024)*
- [C71] Seungwoo Choi, Enhyeok Jang, Youngmin Kim, and Won Woo Ro, “MOSQ: Accelerating Classical Simulation of UCCSD Ansatz Circuits using Merged Operation,” in *The International Conference on Computer Design (ICCD 2024)*
- [C70] Dongho Ha, Lufei Liu, Yuan Hsi Chou, Seokjin Go, Won Woo Ro, Hung-Wei Tseng, and Tor M. Aamodt, “Generalizing Ray Tracing Accelerators for Tree Traversals on GPUs,” in *The 57th IEEE/ACM International Symposium on Microarchitecture (MICRO 2024)*
- [C69] Enhyeok Jang, Seungwoo Choi, Youngmin Kim, Jeewoo Seo, and Won Woo Ro, “Barber: Balancing Thermal Relaxation Deviations of NISQ Programs by Exploiting Bit-Inverted Circuits,” in *The 2024 ACM/IEEE International Conference on Computer-Aided Design (ICCAD 2024)*
- [C68] Enhyeok Jang, Dongho Ha, Seungwoo Choi, Youngmin Kim, Jaewon Kwon, Yongju Lee, Sungwoo Ahn, Hyungseok Kim, and Won Woo Ro, “Recompiling QAOA Circuits on Various Rotational Directions,” in *The 33rd International Conference on Parallel Architectures and Compilation Techniques (PACT 2024)*
- [C67] Dongho Ha, Yunan Zhang, Chen-Chien Kao, Christopher J. Hughes, Won Woo Ro, and Hung-Wei Tseng, “M3XU: Achieving High-Precision and Complex Matrix Multiplication with Low-Precision MXUs,” in *The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC 2024)*
- [C66] Seunghyun Jin, Hyunwuk Lee, and Won Woo Ro, “GUMSO: Gating Unnecessary On-Chip Memory Slices for Power Optimization on GPUs,” in *The 2024 ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED 2024)*

- [C65] Yanghee Lee, Jiwon Lee, Jaewon Kwon, Yongju Lee, and Won Woo Ro, “Geneva: A Dynamic Confluence of Speculative Execution and In-Order Commitment Windows,” in *The 61st Design Automation Conference (DAC 2024)*
- [C64] Mincheol Park, Dongjin Kim, Cheonjun Park, Yuna Park, Gyeong Eun Gong, Won Woo Ro, and Suhyun Kim, “REPrune: Channel Pruning via Kernel Representative Selection,” in *The 38th AAAI Conference on Artificial Intelligence (AAAI 2024)*
- [C63] Jae Seok Kwak, Myung Kuk Yoon, Ipoom Jeong, Seunghyun Jin, and Won Woo Ro, “INTERPRET: Inter-Warp Register Reuse for GPU Tensor Cores,” in *emph The 32th International Conference on Parallel Architectures and Compilation Techniques (PACT 2023)*
- [C62] Jaewon Kwon, Yongju Lee, Hongju Kal, Minjae Kim, Youngsok Kim, and Won Woo Ro, “McCore: A Holistic Management of High-Performance Heterogeneous Multicores,” in *emph The 56th International Symposium on Microarchitecture (MICRO 2023)*
- [C61] Hongju Kal, Chanyoung Yoo, and Won Woo Ro, “AESPA: Asynchronous Execution Scheme to Exploit Bank-Level Parallelism of Processing-in-Memory,” in *emph The 56th International Symposium on Microarchitecture (MICRO 2023)*
- [C60] Seunghwan Sung, Sujin Hur, Dongho Ha, Sungwoo Kim, Yunho Oh, and Won Woo Ro, “MAD MAcce: Supporting Multiply-Add Operations for Democratizing Matrix-Multiplication Accelerator,” in *emph The 56th International Symposium on Microarchitecture (MICRO 2023)*
- [C59] Hyunwuk Lee, Hyungjun Jang, Sungbin Kim, Sungwoo Kim, Wonho Cho, and Won Woo Ro, “Exploiting Inherent Properties of Complex Numbers for Accelerating Complex Valued Neural Networks” in *emph The 56th International Symposium on Microarchitecture (MICRO 2023)*
- [C58] Dongho Ha, Won Woo Ro, and Hung-Wei Tseng, “TensorCV: Accelerating Non-AI/ML Stages in Computing Vision Pipelines using Tensor Processor,” in *emphThe 2023 ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED 2023)*
- [C57] Dongho Ha, Yunho Oh, and Won Woo Ro, “R2D2: Removing ReDunDancy Utilizing Linearity of Address Generation in GPUs” in *emph The 50th International Symposium on Computer Architecture (ISCA 2023)*
- [C56] Seokjin Go, Hyunwuk Lee, Junsung Kim, Jiwon Lee, Myung Kuk Yoon, and Won Woo Ro, “Early-Adaptor: An Adaptive Framework for Proactive UVM Memory Management,” in *emphThe 2023 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS 2023)*
- [C55] Won Woo Ro, “Lightning Talk: Efficiency and Programmability of DNN Accelerators and GPUs,” in *The 60th Design Automation Conference (DAC 2023)*
- [C54] Enhyeok Jang, Seungwoo Choi, and Won Woo Ro, “Quixote: Improving Fidelity of Quantum Program by Independent Execution of Controlled Gates,” in *The 60th Design Automation Conference (DAC 2023)*
- [C53] Cheonjun Park, Mincheol Park, Hyun Jae Oh, Minkyu Kim, Myung Kuk Yoon, Suhyun Kim, and Won Woo Ro, “Balanced Column-Wise Block Pruning for Maximizing GPU Parallelism,” *The 37th AAAI Conference on Artificial Intelligence (AAAI 2023)*
- [C52] Jiwon Lee, Ju Min Lee, Yunho Oh, William J. Song, and Won Woo Ro, “SnakeByte: A TLB Design with Adaptive and Recursive Page Merging in GPUs,” in *The 29th IEEE International Symposium on High-Performance Computer (HPCA 2023)*
- [C51] Ipoom Jeong, Jiwon Lee, Myung Kuk Yoon, and Won Woo Ro, “Reconstructing Out-of-Order Issue Queue,” in *the 55th IEEE/ACM International Symposium on Microarchitecture (MICRO 2022)*
- [C50] Hongju Kal, Seokmin Lee, Gun Ko, and Won Woo Ro, “SPACE: Locality-Aware Processing in Heterogeneous Memory for Personalized Recommendations,” in *the 48th ACM/IEEE International Symposium on Computer Architecture (ISCA 2021)*

- [C49] Hyeonjin Kim, Sungwoo Ahn, Yunho Oh, Bogil Kim, Won Woo Ro, William Song, “Duplo: Lifting Redundant Memory Accesses of Deep Neural Networks for GPU Tensor Cores,” in *the 53rd IEEE/ACM International Symposium on Microarchitecture (MICRO 2020)*
- [C48] Joohyeong Yoon, Won Seob Jeong, and Won Woo Ro, “Check-In: In-Storage Checkpointing for Key-Value Store System Leveraging Flash-Based SSDs,” in *the 47th ACM/IEEE International Symposium on Computer Architecture (ISCA 2020)*
- [C47] Ipoom Jeong, Seihoon Park, Changmin Lee, and Won Woo Ro, “CASINO Core Microarchitecture: Generating Out-of-Order Schedules Using Cascaded In-Order Scheduling Windows,” in *the 26th IEEE International Symposium on High Performance Computer Architecture (HPCA 2020)*
- [C46] Yunho Oh, Gunjae Koo, Murali Annavaram, and Won Woo Ro, “Linebacker: Preserving Victim Cache Lines in Idle Register Files of GPUs,” in *the 46th ACM/IEEE International Symposium on Computer Architecture (ISCA 2019)*
- [C45] Yunho Oh, Myung Kuk Yoon, William J. Song, and Won Woo Ro, “FineReg: Fine-Grained Register File Management for Augmenting GPU Throughput,” in *The 51st IEEE/ACM International Symposium on Microarchitecture (MICRO 2018)*
- [C44] Keunsoo Kim and Won Woo Ro, “WIR: Warp Instruction Reuse to Minimize Repeated Computations in GPUs,” in *the 24th IEEE Symposium on High Performance Computer Architecture (HPCA 2018)*
- [C43] Gunjae Koo, Yunho Oh, Won Woo Ro, and Murali Annavaram, “Access Pattern-Aware Cache Management for Improving Data Utilization in GPU,” in *the 44th ACM/IEEE International Symposium on Computer Architecture (ISCA 2017)*
- [C42] Myung Kuk Yoon, Keunsoo Kim, Sangpil Lee, Won Woo Ro, and Murali Annavaram, “Virtual Thread: Maximizing Thread-Level Parallelism beyond GPU Scheduling Limit,” in *the 43rd ACM/IEEE International Symposium on Computer Architecture (ISCA 2016)*
- [C41] Yunho Oh, Keunsoo Kim, Myung Kuk Yoon, Jong Hyun Park, Yongjun Park, Won Woo Ro, and Murali Annavaram, “APRES: Improving Cache Efficiency by Exploiting Load Characteristics on GPUs,” in *the 43rd ACM/IEEE International Symposium on Computer Architecture (ISCA 2016)*
- [C40] Qiumin Xu, Hyeran Jeon, Keunsoo Kim, Won Woo Ro, and Murali Annavaram, “Efficient Intra-SM Slicing through Dynamic Resource Partitioning for GPU Multiprogramming,” in *the 43rd ACM/IEEE International Symposium on Computer Architecture (ISCA 2016)*
- [C39] Keunsoo Kim, Sangpil Lee, Myung Kuk Yoon, Gunjae Koo, Won Woo Ro, and Murali Annavaram “Warped-Preexecution: A GPU Pre-execution Approach for Improving Latency Hiding,” in *Proceedings of the 22nd IEEE Symposium on High Performance Computer Architecture (HPCA 2016)*
- [C38] Seung Hun Kim, Lei Xu, Ziyi Liu, Zhiqiang Lin, Won Woo Ro, and Weidong Shi, “Enhancing Software Dependability and Security with Hardware Supported Instruction Address Space Randomization,” in *Proceedings of the 45th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN 2015)*
- [C37] Sangpil Lee, Keunsoo Kim, Gunjae Koo, Hyeran Jeon, Won Woo Ro, and Murali Annavaram, “Warped-Compression: Enabling Power Efficient GPUs through Register Compression,” in *The 42nd International Symposium on Computer Architecture (ISCA 2015)*
- [C36] Myung Kuk Yoon, Yunho Oh, Sangpil Lee, Seung Hun Kim, Deokho Kim, and Won Woo Ro, “DRAW: Investigating Benefits of Adaptive Fetch Group Size on GPU,” in *Proceedings of the 2015 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS 2015)*
- [C35] Kyungah Kim, Minwoo Kim, Deokho Kim, and Won Woo Ro, “True Motion Compensation With Feature Detection for Frame Rate Up-Conversion,” in *Proceedings of the 2015 IEEE International Conference on Image Processing (ICIP 2015)*
- [C34] Minsik Kim, Deokho Kim, Minyong Sung, and Won Woo Ro, “An Accelerated Separable Median Filter with Sorting Networks,” in *Proceedings of the 2015 IEEE International Conference on Image Processing (ICIP 2015)*

- [C33] Myung Hyun Jo and Won Woo Ro, "Contention-Free Fair Queuing for High-Speed Storage with RAID-0 Architecture," in *Proceedings of the 17TH IEEE International Conference on High Performance Computing and Communications (HPCC 2015)*
- [C32] Zhimin Gao, Nicholas DeSalvo, Pham Dang Khoa, Seung Hun Kim, Lei Xu, Won Woo Ro, Rakesh M. Verma, and Weidong Shi, "Integrity Protection for Big Data Processing with Dynamic Redundancy Computation," in *Proceedings of the 2015 IEEE International Conference on Autonomic Computing (ICAC 2015)*
- [C31] Lei Xu, Pham Dang Khoa, Seung Hun Kim, Won Woo Ro, and Weidong Shi, "LUT based Secure Cloud Computing - an Implementation using FPGAs 2014 International Conference on ReConfigurable Computing and FPGAs," in *Proceedings of the International Conference on ReConfigurable Computing and FPGAs (ReConFig 2014)*
- [C30] Keunsoo Kim, Changmin Lee, Jung Ho Jung, and Won Woo Ro, "Workload Synthesis: Generating Benchmark Workloads from Statistical Execution Profile," in *Proceedings of the IEEE International Symposium on Workload Characterization (IISWC 2014)*
- [C29] Hyunkyu Park, Changmin Lee, Seung Hun Kim, Won Woo Ro and Jean-Luc Gaudiot, "Mark-Sharing: A Parallel Garbage Collection Algorithm for Low Synchronization Overhead," in *Proceedings of the 19th IEEE International Conference on Parallel and Distributed Systems (ICPADS 2013)*
- [C28] Sangpil Lee and Won Woo Ro, "Parallel GPU Architecture Simulation Framework Exploiting Work Allocation Unit Parallelism," in *Proceedings of The 2013 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS 2013)*, Austin, TX, USA, Apr. 21 – 23, 2013
- [C27] Myung Kuk Yoon, Sangpil Lee, Deokho Kim, and Won Woo Ro, "Directory Centralized Ring-based Interconnection for Multi-Core Systems," in *Proceedings of The 12th International Conference on Electronics, Information and Communication (ICEIC 2013)*, Bali, Indonesia, Jan. 30 – Feb. 2, 2013
- [C26] Hyunkyu Park, Changmin Lee, and Won Woo Ro, "Parallel Garbage Collection with Transactional Memory," in *Proceedings of The 12th International Conference on Electronics, Information and Communication (ICEIC 2013)*, Bali, Indonesia, Jan. 30 – Feb. 2, 2013
- [C25] Dongmin Choi, Seung Hun Kim, and Won Woo Ro, "Conflict Avoidance Scheduling using Grouping List for Transactional Memory," in *Proceedings of The 17th International Workshop on High-Level Parallel Programming Models and Supportive Environments (HIPS-17)*, Shanghai, China, May 21, 2012
- [C24] Changmin Lee, Won Woo Ro, and Jean-Luc Gaudiot, "Cooperative Heterogeneous Computing for Parallel Processing on CPU/GPU Hybrids," in *Proceedings of The 16th Workshop on Interaction between Compilers and Computer Architectures (INTERACT-16)*, New Orleans, USA, Feb. 25 - 29, 2012
- [C23] Minwoo Kim, and Won Woo Ro, "Matrix Data Layout Optimization for Multi-Core Architectures," in *Proceedings of The 11th International Conference on Electronics, Information and Communication (ICEIC 2012)*, Jeongseon, Korea, Feb. 1 - 3, 2012
- [C22] Seung Hun Kim, Dongmin Choi, and Won Woo Ro, "The Effect of Concurrency Control in Transactional Memory Systems," in *Proceedings of The 11th International Conference on Electronics, Information and Communication (ICEIC 2012)*, Jeongseon, Korea, Feb. 1 - 3, 2012
- [C21] Dongmin Choi, Hyunkyu Park, Seung Hun Kim, and Won Woo Ro, "Adaptive Replacement Cache in Transactional Memory," in *Proceedings of The 11th International Conference on Electronics, Information and Communication (ICEIC 2012)*, Jeongseon, Korea, Feb. 1 - 3, 2012
- [C20] Minwoo Kim, Yong J. Jang, and Won Woo Ro, "Parallel Transpose of Matrix Multiplication Based on the Tiling Algorithm," in *Proceedings of The 54th IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2011)*, Seoul, Korea, Aug. 7 - 10, 2011

- [C19] Deokho Kim, Karam Park, and Won Woo Ro, "Performance Evaluation of Adaptive Progressive Network Coding," in *Proceedings of The 54th IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2011)*, Seoul, Korea, Aug. 7 - 10, 2011
- [C18] Doohwan Oh, Sangpil Lee, Deokho Kim, Changmin Lee, and Won Woo Ro, "Development of Virtual CUDA Systems of Parallel Processing on CPU and GPGPU," *Workshop on Micro Architectural Support for Virtualization, Data Center Computing, and Clouds In Conjunction with MICRO 2010 (MASVDC Workshop 2010)*, Atlanta, USA, Dec. 5, 2010
- [C17] Tien-Hsiung Weng, Sheng-Wei Huang, Won Woo Ro, and Kuan-Ching Li, "Implementing FFT using SPMD style of OpenMP," in *Proceedings of the 6th International Conference on Networked Computing and Advanced Information Management (NCM 2010)*, Seoul, Korea, Aug. 16 - 18, 2010
- [C16] Yun H. Oh and Won Woo Ro, "Multi-Threaded Filtered BackProjection Algorithm on Multi-Core Processors," in *Proceedings of The 10th International Conference on Electronics, Information, and Communication (ICEIC 2010)*, Cebu, Philippines, June 30 - July 2, 2010
- [C15] Dong H. Kim, Yun H. Oh, Yun H. Nam, M. Gu, and Won Woo Ro, "Accelerated Reconstruction Using Parallel Computing for Spiral Spectroscopic Imaging," in *Proceedings of 2010 International Society for Magnetic Resonance in Medicine Annual Meeting (2010 ISMRM Annual Meeting)*, Stockholm, Sweden, May 1 - 7, 2010
- [C14] Sunwoo Kim and Won Woo Ro, "FPGA Implementation of Highly Parallelized Decoder Logic for Network Coding," in *Proceedings of Eighteenth ACM/SIGDA International Symposium on Field-Programmable Gate Arrays (FPGA2010)*, Monterey, USA, Feb. 21 - 23, 2010
- [C13] Yong J. Jang and Won Woo Ro, "Evaluation of Cache Coherence Protocols on Multi-Core Systems with Linear Workloads," in *Proceedings of 2009 International Colloquium on Computing, Communication, Control, and Management (CCCM2009)*, Sanya, China, Aug. 8 - 9, 2009
- [C12] Jongwook Woo and Won Woo Ro, "Comparing Open Source Web Services: gSoap and AXIS," in *Proceedings of the 24th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2009)*, Jeju Island, Korea, July 5 - 8, 2009
- [C11] Karam Park, Joon-Sang Park, and Won Woo Ro, "Efficient Parallelized Network Coding for P2P File Sharing Applications," in *Proceedings of the 4th International Conference on Grid and Pervasive Computing (GPC 2009)*, Geneva, Switzerland, May 4 - 8, 2009
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