

HOKEUN CHA

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RESEARCH INTERESTS

Non-Volatile Memory Systems
Storage Systems & Database Systems
Distributed Systems over RDMA Networks

EDUCATION

University of Wisconsin-Madison, Wisconsin, USA

Ph.D. in Computer Science

Jan. 2021 - Present

Sungkyunkwan University, Suwon, South Korea

M.S. in Electrical and Computer Engineering

Sep. 2018 - Aug. 2020

- Advisor: Prof. Beomseok Nam
- Thesis: Leveraging Byte-Addressability of Persistent Memory for B+-tree

B.S. in Computer Science and Engineering

Mar. 2012 - Aug. 2018

B.B.A in Business Administration

Mar. 2012 - Aug. 2018

RESEARCH EXPERIENCE

Sungkyunkwan University, Suwon, South Korea

Researcher at Convergence Research Institute

Sep. 2020 - Dec. 2020

- Disaggregated Persistent Memory over RDMA Networks

Graduate Research Assistant

Sep. 2018 - Aug. 2020

- Designing Indexing Structures
 - Write-Optimized B+-tree for Persistent Memory
 - Cacheline-Conscious Extendible Hashing for Persistent Memory

Undergraduate Research Assistant

Mar. 2018 - Aug. 2018

- Research in Non-Volatile Memory Systems
- Research in RDMA Networks

PUBLICATIONS

- [1] “**B³-tree: Byte-Addressable Binary B-Tree for Persistent Memory**”
Hokeun Cha, Moohyeon Nam, Kibeom Jin, Jiwon Seo and Beomseok Nam
ACM Transactions on Storage (**TOS**), vol.16 no.3, Aug. 2020. [\[doi\]](#)
- [2] “**Write-Optimized Dynamic Hashing for Persistent Memory**”
Moohyeon Nam, **Hokeun Cha**, Young-ri Choi, Sam H. Noh and Beomseok Nam
In proceedings of the 17th USENIX Conference on File and Storage Technologies (**FAST’19**),
(18% a/r), Feb. 2019. [\[view paper\]](#)

TEACHING EXPERIENCE

University of Wisconsin-Madison, Wisconsin, USA

Graduate Teaching Assistant

- Database Management Systems

Spring, 2021

Sungkyunkwan University, Suwon, South Korea

Graduate Teaching Assistant

- Multi-core Computing
- Programming Languages

Fall, 2019

Spring, 2019

PROFESSIONAL PRESENTATION

- [1] “**Write-Optimized Dynamic Hashing for Persistent Memory**”, Invited Paper Presentation in Korea Software Congress (KSC), Pyeongchang, South Korea, Dec. 2019

HONORS

CS Departmental Scholarship

Spring, 2021

University of Wisconsin-Madison, Wisconsin, USA

SimSan Scholarship

Fall, 2018 - Spring, 2020

Sungkyunkwan University, Suwon, South Korea

Merit-based scholarship for graduate students

MunHaeng Scholarship

Spring, 2013

Sungkyunkwan University, Suwon, South Korea

Merit-based scholarship for undergraduate students

Club Scholarship

Spring, 2013

Sungkyunkwan University, Suwon, South Korea

OTHER EXPERIENCE

Shinhan Bank, Shanghai, China

Jan. 2017 - Feb. 2017

- Business management internship

Korea Exchange & Happy Foundation Corp., Seoul, South Korea

Jan. 2016 - Jan. 2016

- Volunteer service of school education and renovation in Vientiane, Laos

Childfund Korea, Seoul, South Korea

Sep. 2015 - Sep. 2018

- Volunteer service of letter translation (English ↔ Korean)

Wable Company, Seoul, South Korea

Nov. 2012 - Jun. 2013

- Mobile application marketing internship