# HOKEUN CHA

#85549 Corporate Collaboration Center, 2066 Seoburo, Jangan-gu, Suwon-si, 16419, South Korea

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## RESEARCH INTERESTS

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

## EDUCATION

**University of Wisconsin-Madison**, Wisconsin, USA
Ph.D. in Computer Science                                  *(expected) Jan. 2021 - Dec. 2025*

**Sungkyunkwan University (SKKU)**, 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 (SKKU)**, Suwon, South Korea

Researcher at Data-Intensive Computing Lab. (DICL)                *Sep. 2020 - Present*
- 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] **"$B^3$-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

**Sungkyunkwan University (SKKU)**, Suwon, South Korea
Graduate Teaching Assistant
- Multi-core Computing                                    *Fall, 2019*
- Programming Languages                              *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

## OTHER EXPERIENCE

**Shinhan Bank**, Shanghai, China                        *Jan. 2017 - Feb. 2017*
- Business management internship

**Korea Exchange & Happy Foundation Corps.**, 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

## HONORS

**SimSan Scholarship**, Sungkyunkwan University, Suwon, South Korea     *Fall, 2018 - Spring, 2020*
*Merit-based scholarship for graduate students*

**MunHaeng Scholarship**, Sungkyunkwan University, Suwon, South Korea     *Spring, 2013*
*Merit-based scholarship for undergraduate students*

**Club Scholarship**, Sungkyunkwan University, Suwon, South Korea     *Spring, 2013*

## REFERENCES

**Ph.D. Beomseok Nam**
Associate Professor                                      E-mail: bnam@skku.edu
College of Software                                      [http://dicl.skku.edu/~bnam/](http://dicl.skku.edu/~bnam/)
Sungkyunkwan University, Suwon, South Korea

**Ph.D. Sangwon Lee**
Professor                                                E-mail: swlee@skku.edu
College of Software                                      [http://prof.icc.skku.ac.kr/~swlee/](http://prof.icc.skku.ac.kr/~swlee/)
Sungkyunkwan University, Suwon, South Korea

**Ph.D. Jitae Shin**
Professor                                                E-mail: jtshin@skku.edu
College of Information and Communication Engineering   [http://msl.skku.ac.kr/sub1-1.html?select=1](http://msl.skku.ac.kr/sub1-1.html?select=1)
Sungkyunkwan University, Suwon, South Korea

*I certify this CV is accurate and complete* - **November 2, 2020**