

CONTACT INFORMATION	Room 736, Natural Science Building, Hanyang University, 222, Wangsimni-ro, Seongdong-gu, Seoul, 04763, Republic of Korea Tel: +82 10-7137-0381	Homepage: Linkedin: https://www.linkedin.com/in/hyeonbum-lee-a176b120a/ ✉ E-mail: leehb3706@hanyang.ac.kr
RESEARCH BACKGROUND	<ul style="list-style-type: none"> • Cryptography: Zero-Knowledge Proofs, Verifiable Computing, Secure Multi-Party Computation 	
EDUCATION	Hanyang University , Seoul <ul style="list-style-type: none"> • Ph.D. Department of Mathematics • Advisor: Prof. Jae Hong Seo. Hanyang University , Seoul.	Mar 2020 - Present Mar 2014 - Feb 2018
RESEARCH PROJECTS	Zero-Knowledge Proofs & Verifiable Computing <ul style="list-style-type: none"> • A Study on Cryptographic Primitives for SNARK Supported by Institute of Information & Communications Technology Planning & Evaluation (IITP), Research Associate, Apr 2021 - Dec 2026. • Research on Incrementally Verifiable Computation Design Technique and Application Method Supported by National Security Research Institute (NSR), Researcher, Apr 2021 - Oct 2021. • Research on Post-Quantum Non-Interactive Zero-Knowledge Proofs Supported by National Research Foundation of Korea (NRF), Researcher, Mar 2020 - Feb 2025. • Research on Post-Quantum Zero-Knowledge Proofs Design Technique and Application Method Supported by National Security Research Institute (NSR), Researcher, Apr 2020 - Oct 2020. Others <ul style="list-style-type: none"> • Secure Multi-party Approximate Computation Supported by Samsung Science & Technology Foundation, Researcher, Sep 2021 - Aug 2024. • A Study of Functional Encryption and Its Core Techniques Supported by Institute of Information & Communications Technology Planning & Evaluation (IITP) & National Research Foundation of Korea (NRF), Researcher, Mar 2020 - Jul 2021. 	
SELECTED PUBLICATIONS	Journal <ol style="list-style-type: none"> 1. Chanyang Ju, Hyeonbum Lee, Heewon Chung, Jae Hong Seo, and Sungwook Kim, <i>Efficient Sum-Check Protocol for Convolution</i> IEEE Access, vol. 9, pp. 164047-164059, 2021, doi:10.1109/ACCESS.2021.3133442. 2. Chanyang Ju, Hyeonbum Lee, Heewon Chung, and Jae Hong Seo, <i>Analysis of Zero-Knowledge Protocols for Verifiable Computation and Its Applications</i> Journal of The Korea Institute of Information Security & Cryptology VOL.31, NO.4, Aug. 2020 	
EXPERIENCE	Work Experience <ul style="list-style-type: none"> • Teaching Assistant <ul style="list-style-type: none"> ◦ Spring 2021: Calculus I ◦ Fall 2020: Modern Algebra II ◦ Spring 2020: Modern Algebra I Others	
TECHNICAL SKILLS	<ul style="list-style-type: none"> • <i>Technical Softwares:</i> MATLAB, \LaTeX. 	

TALKS & PRE-SENTATIONS **Presentations**

- *Transparent and efficient zero-knowledge arguments from discrete log with better complexity*
2021 KMS Spring Meeting, Virtual, 30 Apr. 2021

HONORS & AWARDS **Awards**

- ***Special Prize***, National Cryptographic Technology Contest. Oct 2021
Korea Cryptography Forum
- ***SUMMA CUM LAUDE***, Graduate Honors. Feb 2018
Hanyang University
- ***Dean's list*** 2016 (Fall)
College of Natural Science, Hanyang University

Scholarships

- **Teaching Assistant Scholarship** Sep 2020 - Present
Hanyang University
\$6000/year
- **Master and Ph.D Program Scholarship** Mar 2020 - Present
Hanyang University
Full tuition for 3 years (\approx \$12000/year)
- **Hanyang Excellent Scientist Scholarship** Mar 2014 - Feb 2018
Hanyang University
Full tuition for 4 years (\approx \$8000/year)

SERVICES **External Reviewer**

- ICISC 2021; ASIACRYPT 2021; PQCrypto 2021; APKC 2021; ProvSec 2020;