

# Hwang In Tak

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## RESEARCH INTERESTS

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Modern Cryptography

## EDUCATION

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**Seoul National University** 2023 — Present  
Integrated M.S./Ph.D. in Computer Science & Engineering  
Advisor: Prof. Yongsoo Song

**UC Berkeley** 2018 Summer  
Summer Sessions, in part of DGIST Freshmen Global Leadership Program (FGLP)

**DGIST** 2018 — 2022  
B.S. in School of Undergraduate Studies *Summa Cum Laude*

**Sangsan High School** 2015 — 2017

## HONORS AND SCHOLARSHIPS

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**CTF Security Competitions** 2020 — Present  
SSTF Hacker's Playground 2022 *5th place*  
WhiteHat Contest 2021 *3rd place*  
DEF CON CTF 2021 *Finalist*  
PlaidCTF 2021 *5th place*  
Real World CTF 2020/2021 (Media Coverage) *1st place*  
Midnight Sun CTF 2020 Finals *7th place*  
TokyoWesterns CTF 2020 Finals *3rd place*  
DEF CON CTF 2020 *Finalist*

**DGIST Dean's List** 2020

## CONFERENCE PRESENTATIONS

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**Accelerating Homomorphic Encryption via Level-aware Key-switching** 2023.04  
2023 KMS Spring Meeting

## RESEARCH EXPERIENCE

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**SNU Cryptography & Privacy Lab (Internship)** 2022.07. — 2022.08.  
Mentors: Prof. Yong Soo Song (SNU)

<b>DGIST Information and Intelligence Lab (IIL)</b> Mentors: Prof. Yong June Kim (DGIST)	2022.01. — 2022.06.
<b>DGIST Undergraduate Group Research Program (UGRP)</b> Mentors: Prof. Hyo Sang Kang (DGIST)	2020
<b>DGIST Division of Intelligent Robotics</b> Mentors: Dr. Sang Chul Lee (DGIST)	2020.06. — 2020.08.
<b>DGIST Computer Architecture and Systems Lab (CASLAB)</b> Mentors: Prof. Dae Hoon Kim (DGIST)	2019.06. — 2019.08.
<b>NIMS Academy for Industrial Mathematics</b>	2019.08.

## TEACHING EXPERIENCE

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<b>Teaching Assistant at SNU</b> Engineering Mathematics 1	2023.03. — 2023.06.
<b>Teaching Assistant at KAIST PRE-URP</b> Decrypting RSA using Shor's Algorithm Drawing Escherian Image Using Hyperbolic Tiling Making a Quantum Error Correction Game	2021.12. — 2022.02. 2021.06. — 2021.08. 2020.12. — 2021.02.
<b>Seminars at DGIST Clubs</b> Introduction to Homomorphic Encryption Game Development Using Godot Engine A Short Introduction to Approximation Theory Solving Integer Problems Using Lattices	2022.10. 2022.05. 2022.04. 2021.11.
<b>Tutor at DGIST</b> SE201 Linear Algebra SE102 Multivariate Calculus	2020 Spring 2019 Fall

## SKILLS

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### Languages

Korean (native), English (fluent)

### Programming Languages

Advanced: Go, Python (SageMath)

Intermediate: C, C++, C#, Rust

## OTHER ACTIVITIES

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**Member of CTF Team CodeRed**

2020 — Present

I participate in CTF competitions from time to time, mostly solving crypto challenges.

**Developer & Writer of Team Invertible**

2020 — Present

I am actively working on INVERTIBLE, a sokoban puzzle game. We recently ran our first closed beta test. We are planning to release the game on Steam in 2023.

**President of DGIST Math Club**

2021 — 2022

I founded DGIST Math Club in 2021. We hold seminars and meetings on a regular basis.

**OTHER INTERESTS**

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I love watching films. I wrote and directed three short films in college, and I still write screenplays as a hobby!