Jaehyun Koo (구재현)

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EDUCATION

Massachusetts Institute of Technology Cambridge, MA, United States, 2023 -
Ph.D. Student, EECS Department
Research Area: Theoretical Computer Science
Advisor: Mohsen Ghaffari

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, Korea, 2017 - 2023
Undergraduate
School of Computing (Minor: Mathematics)

Gyeonggi Science High School Suwon, Korea, 2014 - 2017

PUBLICATIONS

All authors are listed in alphabetical order.

Parallel Batch-Dynamic Coreness Decomposition with Worst-Case Guarantees
Mohsen Ghaffari, Jaehyun Koo
SPAA '25

Parallel Batch-Dynamic Algorithms for Spanners, and Extensions
Mohsen Ghaffari, Jaehyun Koo
SPAA '25

An Optimal MPC Algorithm for Subunit-Monge Matrix Multiplication, with Applications to LIS
Jaehyun Koo
SPAA '24

Anarchy in the APSP: Algorithm and Hardness for Incorrect Implementation of Floyd-Warshall
Jaehyun Koo
FUN '24

SERVICES

- Conference Reviewing: SODA 2026, ITCS 2025, SOSA 2025, SODA 2025, ISAAC 2020

EXPERIENCE

Teaching

- Distributed Algorithms (Teaching Assistant, MIT, Fall 2025)

Programming Contest

- ICPC Programming Contest
  - MIT Team Coach (2025 -)
- Olympiad in Informatics
  - International Olympiad in Informatics (IOI) Korean Team Selection Contest Problemsetter (2019 -)
  - Korean Olympiad in Informatics (KOI) Problemsetter (2020 -)
  - Head coach of Korean IOI Team (2024, 2023, 2019, 2018)
  - Coach in Korean IOI Seasonal Training Camp (2024, 2021, 2020, 2019, 2017)

Software Engineering 2020 - 2022

- Software Engineer at MOLOCO, mobile advertisement platform company located in Seoul, Korea.
- Developed backend features using Golang.
- The work was considered as an alternative military service from Korean Military Manpower Administration.

SELECTED AWARDS AND HONORS

- Google Code Jam 2021, 2020 Top 25 Invited Finalist (rank 12 in 2020)
- Facebook Hacker Cup 2021, 2020, 2019, 2017 Top 25 Invited Finalist (rank 6 in 2020)
- ICPC World Finals 2019, 2018 Participant
- Presidential Science Scholarship, Korea Student Aid Foundation, 2017.
- Gold Medal in International Olympiad in Informatics 2016 (15th place out of 308 participants)
- Gold Medal in Asia-Pacific Olympiad in Informatics 2016 (5th place out of 169 participants)
- Silver Medal in International Olympiad in Informatics 2015 (46th place out of 322 participants)