Seonghyuk Im
Graduate student at KAIST
https://seonghyukim.github.io/

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Current Position

- **KAIST** Daejeon, South Korea
  Integrated master's/doctoral program *2021-Current*
  – Advised by Jaehoon Kim and Hong Liu.

Education

- **KAIST** Daejeon, South Korea
  B.S., Mathematics *2016-2020*
  – Advised by Yong Jung Kim.

Publications

- A bandwidth theorem for graph transversals (with Debsoumya Chakraborti, Jaehoon Kim, and Hong Liu), *arXiv:2302.09637*
- A proof of the Elliott-Rödl conjecture on hypertrees in Steiner triple systems (with Jaehoom Kim, Joonkyong Lee, and Abhishek Methuku), *arXiv:2208.10370*
- The proper conflict-free k-coloring problem and the odd k-coloring problem are NP-complete on bipartite graphs (with Jungho Ahn and Sang-il Oum), *arXiv:2208.08330*
- Crux, space constraints and subdivisions (with Jaehoon Kim, Younjin Kim, and Hong Liu), *arXiv:2207.06653*
- Complexity of Partitioning Hypergraphs, *arXiv:1812.09206* (decided not to publish)
- On the mean square displacement of a random walk on a graph (with Hwidong Kim, Jiho Maeng, Jihwan Yu, Yongwook Cha, and Seong-HunPaeng) *European Journal of Combinatorics* 51 (2016): 227-235

Talks

- IBS Discrite Math Seminar
  November 29, 2022
  A proof of the Elliott-Rödl conjecture on hypertrees in Steiner triple systems (Youtube)
- KAIST Math Graduate student Seminar (KMGS)
  Novembeer 3, 2022
  Large clique subdivisions in graphs without small dense subgraphs

- 2021 Combinatorics Workshop
  December 21, 2021
  Large clique subdivisions in graphs without small dense subgraphs (Youtube)

- IBS DIMAG Seminar
  November 30, 2021
  Large clique subdivisions in graphs without small dense subgraphs (Youtube)

Competitive Programming

2018 Kakao Code Festival 5th prize(30th place) 2018
2017 ACM-ICPC Daejeon Regional 17th place 2017

TA works

2023

- (spring) MAS 101 Calculus 1 and MAS 275 Discrete mathematics at KAIST

2022

- (fall) MAS 102 Calculus 2 and MAS 477 Introduction to Graph Theory at KAIST
- (spring) MAS 102 Calculus 2 and MAS 275 Discrete mathematics at KAIST

2021

- (fall) MAS 102 Calculus 2 and CC511 Probability and Statistics at KAIST
- (spring) MAS 101 Calculus 1 at KAIST (Won the Outstanding Teaching Assistant Award).