



Soheun Yi

Curriculum Vitae

Education

- 2017–Present **B.S. in Mathematics at Seoul National University**, *GPA: 4.21/4.3*.
- Major GPA: 4.23/4.3
 - Dean's List: Spring 2017–Fall 2019, Fall 2021–Spring 2022
- 2014–2017 **Seoul Science High School**, *GPA: 4.29/4.3*.
- Graduated with Excellence Awards

Research Interests

Optimization via operator splitting scheme
Causal discovery

Experience

Research

- 2021–Present **Research Intern at Ryu's Optimization Group**.
Convergence analyses of Davis–Yin splitting via scaled relative graphs.
- 2019 **Research Intern at Hyungbin Park's Lab**.
Stochastic optimal control.

Employment

- 2019–2021 **Quantative Analyst at Hyperithm, Seoul**.
Served as an alternative for mandatory military service
Developed cryptocurrency trading strategies
- Scalable options market simulation
 - Transaction monitoring and analysis
 - Portfolio management assistant

Teaching

- 2019 **Deputy Leader of Team Korea at Romanian Master of Mathematics**.
Team Korea: 2nd place.
- 2018 **Teaching Assistant at Korea Mathematics Olympiad Winter School, KAIST**.
- 2014–2019 **Voluntary Teaching for Low-income Children**.

Publications

- 2022 Jongmin Lee*, **Soheun Yi***, and Ernest K. Ryu, "Convergence Analyses of Davis-Yin Splitting via Scaled Relative Graphs", preprint, 2022, [arXiv:2207.04015](https://arxiv.org/abs/2207.04015).

Awards and Honors

- 2022–Present Overseas PhD Candidate Scholarship from Korea Foundation for Advanced Studies
2020 Simon Marais Mathematics Competiton, *Pair Merit Prize*
2019–Present Undergraduate Scholarship from Korea Foundation for Advanced Studies
2018 Korea Undergraduates Mathematics Competition, *Field 1 Gold Prize*
2017–Present Presidential Science Scholarship from Korea Student Aid Foundation
2016 Korea Final Candidates for International Mathematical Olympiad(IMO)
2016 Asian Pacific Mathematical Olympiad(APMO), *Bronze Award*
2016 Romanian Master of Mathematics, *Silver Medal*

Selected Courses

Mathematics

Undergraduate

- Numerical Analysis, Mathematical Optimization, Financial Mathematics, Topology, Differential Geometry, Differential Equations.

Graduate

- Real Analysis, Functional Analysis, Topics in Applied Mathematics: Infinitely Large Neural Networks.

Others

Undergraduate

- Mathematical Statistics, Regression Analysis, Game Theory and Applications.

Graduate

- Scalable High Performance Computing, Graph Neural Networks, Reinforcement Learning.

Extracurricular

- 2021 Visualizing Interpolation Methods. [Github Repo.](#), [Github Sites](#)
2019-2020 SNU Vocal and Hip-hop Club "Triple-H"
2017-2018 Leader, Vocal of Band "Limsup"

*Equal contribution.