Jonghwa Park

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Research Interests

Stochastic analysis, optimal transport; applications in mathematical finance and statistics.

Education

Aug 2020 – present
Ph.D. in Mathematics, Carnegie Mellon University, USA
- Advised by Martin Larsson and Johannes Wiesel

Mar 2018 – Aug 2020
M.S. in Mathematics, Seoul National University, South Korea
- Advised by Hyungbin Park

Mar 2011 – Feb 2018
B.A. in Economics and B.S. in Mathematics, Seoul National University, South Korea
- *cum laude*
- On leave for military service in South Korea from May 2013 to Feb 2015

Publications and Preprints

1. **On a T_1 Transport inequality for the adapted Wasserstein distance**, *submitted*, 2025, arXiv
2. **The fast rate of convergence of the smooth adapted Wasserstein distance** (with Martin Larsson and Johannes Wiesel), *submitted*, 2025, arXiv
3. **Bounding adapted Wasserstein metrics** (with Jose Blanchet, Martin Larsson and Johannes Wiesel), *under revision*, 2024, arXiv
4. **On concentration of the empirical measure for radial transport costs** (with Martin Larsson and Johannes Wiesel), *Stochastic Processes and their Applications 178 (104466)*, 2024, journal|arXiv
5. **Pricing and hedging short-maturity Asian options in local volatility models** (with Jaehyun Kim and Hyungbin Park), 2019, arXiv
   [Work conducted before entering Ph.D. program]

Selected Presentations

Oct 2025
Eastern Conference on Mathematical Finance, Carnegie Mellon University, USA
- Poster presentation

Sep 2024
Eastern Conference on Mathematical Finance, University of Toronto, Canada
- Poster presentation
- Title: Bounding adapted Wasserstein metrics, poster

June 2023
SIAM Conference on Financial Mathematics and Engineering, Philadelphia, USA
- Speaker in Minisymposium *Optimal Transport and Applications in Mathematical Finance - Part I of II*
- Title: A new concentration inequality for the optimal transport cost between the true and empirical measure, presentation

Teaching Assistant Experience

Note: * indicates courses with recitations in addition to grading and office hours

Carnegie Mellon University (MSCF Program)

Fall 2025	Risk Management (46954)	*TA*
Spring 2025	Financial Products and Markets (46974)	*TA**
Fall 2024	Risk Management (46954)	*TA*
Spring 2024	Stochastic Calculus for Finance II (46945)	*TA**
Fall 2023	Advanced Derivative Models (46915)	*TA*
Fall 2022	Stochastic Calculus for Finance I (46944)	*TA**

Carnegie Mellon University (Department of Mathematical Sciences)

Summer 2024	Probability (21325)	*TA*
Summer 2023	Probability (21325)	*TA*
Spring 2023	Introduction to Functional Analysis (21640)	*Grader*
Spring 2022	Continuous Time Finance (21420)	*TA*
Fall 2021	Discrete Time Finance (21370)	*TA*
Spring 2021	Principles of Real Analysis II (21356)	*Grader*
Fall 2020	Principles of Real Analysis I (21355)	*Grader*

Seoul National University

Spring 2020	Stochastic Differential Equations 1	*TA*
Fall 2019	Introduction to Mathematical Analysis 2	*TA*
Spring 2019	Financial Mathematics 1	*TA*
Fall 2018	Engineering Mathematics 2	*TA*
Spring 2018	Engineering Mathematics 1	*TA*

Awards and Scholarships

May 2009	23th Korean Mathematical Olympiad first test, Bronze medal	
Fall 2019	Brain Korea 21+ Research Scholarship	*Seoul National University*
Fall 2019	Merit-based Scholarship	*Seoul National University*
Spring 2019	Lecture and Research Scholarship	*Seoul National University*
2018	Teaching Assistant Scholarship	*Seoul National University*
Spring 2011	Superior Academic Performance Scholarship	*Seoul National University*

Miscellaneous

Languages	English (fluent), Korean (native)
Programming	Python, LaTeX, MATLAB
Citizenship	Republic of Korea