

PERSONAL

Date of Birth: December 9, 1989

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ADDRESS

Department of Financial Engineering, Korea University.

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405, 29-13, Dongil-ro 178-gil, Nowon-gu, Seoul, 01848 Korea

EXPERIENCE

- Researcher, Garam Analytics (2014.12-present)
- Researcher, Research project for Industrial mathematics
supported by the National Institute of Mathematics Sciences(NIMS) (2015.07-present)
- Research assistant, R&E Program for Seoul Science High School (2016.03-present)
Department of Mathematics
Supervisor : Professor Junseok Kim
- Researcher, Industry-academic project (2015.08-2015.09)
Verification of OTC derivatives pricing modules
Department of Mathematics
Supervisor : Professor Junseok Kim
- Research assistant, R&E Program for Seoul Science High School (2015.03-2015.12)
Major in Mathematics Education, Hankuk University of Foreign Studies
Supervisor : Professor Young Rock Kim

EDUCATION

- M.S., Financial Engineering, Korea University, Korea, 2015-present
◦ Advisor: Junseok Kim
- B.S., Computer and Information Science, Korea University Sejong campus, Korea, 2008-2015
- B.S., Financial Derivatives and Engineering, Korea University Sejong campus, Korea, 2008-2015
◦ GPA: 4.06 / 4.5

INTERESTS

- Pricing and hedging derivatives using numerical method
- Partial differential equations
- Adaptive mesh for finite difference method
- Numerical method for american options
- Monte Carlo simulation with variance reduction
- Multi-dimensional problem in financial model (Stochastic volatility, Jump-diffusion, etc)
- Local volatility
- Program optimization
- High performance computing
◦ CUDA

RELEVANT SKILLS

- Programming Languages: C, C++, CUDA C, C#, Python, MATLAB
- Operating System: Windows, Linux, Mac

RESEARCH PUBLICATIONS

1. Choi, Y., Jeong, D., Kim, J., Kim, Y. R., Lee, S., Seo, S., & Yoo, M.
Robust and accurate method for the Black-Scholes equations with payoff-consistent extrapolation,
Communications of the Korean Mathematical Society, Vol. 30, No. 3, pp.297–311, 2015.
[PDF](#)
2. Choi, Y., Jeong, D., Lee, S., Yoo, M., & Kim, J.
Motion by mean curvature of curves on surfaces using the Allen–Cahn equation,
International Journal of Engineering Science, Vol. 97, pp. 126–132, 2015.
[PDF](#)
3. Yoo, M., Jeong, D., Seo, S., & Kim, J.
A comparison study of explicit and implicit numerical methods for the equity-linked securities,
The Honam Mathematical Journal, Vol 37, pp. 441–455, 2015.
[PDF](#)
4. Kim, J., Kim, T., Jo, J., Choi, Y., Lee, S., Hwang, H., Yoo, M., & Jeong, D.
A practical finite difference method for the three-dimensional Black-Scholes equation,
European Journal of Operational Research, 2015.
[PDF](#)
5. Jeong, D., Yoo, M., & Kim, J.
Accurate and efficient computations of the Greeks for options near expiry
using the Black–Scholes equations,
Discrete Dynamics in Nature and Society, 2016.
[PDF](#)
6. Kim, J., Yoo, M., Son, H., Lee, S., Kim, M., Choi, Y., Jeong, D., & Kim, Y.
Path Averaged Option Value Criteria for Selecting Better Options.
Journal of the Korean Society for Industrial and Applied Mathematics, Accepted, 2016.

WORKING PAPERS

1. Jeong, D., Li, Y., Lee, S., Yoo, M., Choi, Y., & Kim, J.
Numerical simulation of the zebra pattern formation.
2. Jeong, D., Yoo, M., & Kim, J.
A hybrid Monte Carlo and finite difference method for option pricing.
3. Jeong, D., Yoo, M., & Kim, J.
Finite difference method for the Black-Scholes equation without boundary conditions.

BOOK

1. 정다래, 김영록, 황형석, 유민현, 김준석
파생상품 프로그래밍,
경문사, 2015.
[Google Books](#)

For additional information, please contact me.