

PERSONAL

Date of Birth: December 9, 1989

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Portfolio: github.com/ymh1989

EXPERIENCE

- Associate, Quant developer
Quantitative Modeling Risk Dept. KB Securities (2016.10-)
- Researcher, Garam Analytics (2014.12-2016.06)
- Researcher, Research project for Industrial mathematics
supported by the National Institute of Mathematics Sciences(NIMS) (2015.07-2016.09)
- Research assistant, R&E Program for Seoul Science High School (2016.03-2016.09)
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, 2015.03-2017.02
 - Advisor: Junseok Kim
 - Thesis : Monte Carlo methods for option pricing : with Python
 - GPA: 4.0 / 4.5
- B.S., Computer and Information Science, Korea University Sejong campus, Korea, 2008.03-2015.02
- B.S., Financial Derivatives and Engineering, Korea University Sejong campus, Korea, 2008.03-2015.02
 - GPA: 4.06 / 4.5

INTERESTS

- Pricing and hedging derivatives using numerical method
- Volatility modeling (i.e. SVI, SABR...) and local volatility
- 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 (i.e. Heston, Jump-diffusion...)
- Program optimization
- High performance computing (i.e. CUDA)

RELEVANT SKILLS

- Programming Languages: C, C++, C#, Python, CUDA C, 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, 30(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, 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, 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, 20(2), pp.163–174, 2016.
[PDF](#)
7. Jeong, D., Yoo, M., & Kim, J.
Finite Difference Method for the Black–Scholes Equation Without Boundary Conditions.
Computational Economics, pp.1-12, 2017.
[PDF](#)
8. Jeong, D., Li, Y., Choi, Y., Yoo, M., Kang, D., Park, J., Choi, J., & Kim, J.
Numerical simulation of the zebra pattern formation on a three-dimensional model
Physica A: Statistical Mechanics and its Applications, 475(1), pp.106–116, 2017.
[PDF](#)
9. Jeong, D., Yoo, M., Yoo, C., & Kim, J.
A Hybrid Monte Carlo and Finite Difference Method for Option Pricing
Computational Economics, pp.1–14, 2017.
[PDF](#)

BOOK

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