HAIDONG GU

739 Evans St · Bethlehem · PA 18015   hag218@lehigh.edu   (484) 633-4591

Education

Lehigh University **Pennsylvania, United States**
PhD in Industrial and Systems Engineering *09/2018 – Present*

Rutgers University (New Brunswick) **New Jersey, United States**
MS in Mathematical Finance *09/2015 – 05/2017*

China University of Petroleum (East China) **Shandong, China**
BS in Mathematics and Applied Mathematics *09/2011 – 06/2015*

Experience

Credit Suisse **Raleigh, United States**
Global Rates Valuation Control Analyst *07/2017 – 07/2018*

- Took responsibility for the independent valuation of the US Rates business, focusing on Exotic products
- Took responsibility for the governance and control of the product valuation and model review process

Imagine Software **New York City, United States**
Financial Model Validation *10/2016 – 12/2016*

- Assisted enabling clients of Imagine Trading System (ITS) to achieve key benefits for their organizations
- Maximized returns and managed risk, achieved transparency and gained operational efficiencies by ITS

Projects

Constructing Alpha Model by PCA from a Large Number of Predictors *12/2016*

- Applied Principal Component Analysis (PCA) to extract potential statistical factors that can predict stock returns
- Constructed Alpha Model based on PCA and used Objective Function to optimize Portfolio

Pricing American Option under Heston-CIR Model using Numerical Method *05/2016*

- Pricing a finite-maturity American Put Option under the Heston model with the stochastic interest rate of CIR type
- ADI and Yanenko methods are used to implement FDM to deal with 3D space model

Valuation of Power Plant using Least Squares Monte Carlo *05/2015*

- Studied and analyzed the power and natural gas markets of Australia
- Built a stochastic model for market heat rate and used LSMC to determine the optimal operating policy

Publications

[1] Z. Sun, L. Du, **H. Gu**, L. Li, B. Long, X. Song. Global Investment Strategy Leveraging US Interest Hike Cycle. *International Association for Quantitative Finance (**IAQF winning paper**)*, 2017

[2] **H. Gu**, T. Yan. Study of Co-authorship of International Mathematicians Based on Social Network Analysis. *Electronics World Journal*, 2014

Skills

Computer Skills: C/C++, Python (PyTorch, PySpark etc), MATLAB, R, Bash, Gurobi, Java, LaTeX, VBA, SQL, Bloomberg, Microsoft Office

Certifications: CFA Level I passed, Society of Actuaries Exam P (Probability) passed

Languages: English, Chinese