Haosu Tang

411 Webster St., Apt 105, Bethlehem, PA 18015
(610) 844-3310 haosutang@gmail.com

EDUCATION

Lehigh University Bethlehem, PA
Ph.D. in Physics 08/2010 - 06/2015(expected)
-Intensive research work on mathematical and computational modeling of stochastic systems.
-Coursework related to quantitative finance: Financial Calculus (sit-in), Numerical Methods and Simulation, Monte Carlo Simulation, Methods of Mathematical Physics, CFA program.
-GPA 3.8/4.0, top 1.

University of Science and Technology of China Hefei, China
B.S., Special Class for the Gifted Young, majored in Physics 09/2006 – 07/2010
-Relative coursework: Venture and Investment, Mathematical Analysis, Probability Theory and Mathematical Statistics, Mathematical Physics Equations, Computational Methods.

SKILLS

- Programming: Java, C++/C, Python, Matlab, Fortran, Mathematica;
- Data Analysis: MS Excel VBA, Origin, R, KaleidaGraph, SAS;
- Modeling and Visualization: Quantlib, Opensourcephysics API, Inkscape;
- Miscellaneous: Unix, Latex, HTML 5/CSS;

RELATIVE EXPERIENCE

Programming: 08/2010 – 09/2014
-Option pricing and risk modeling in C++ (800+ lines).
-Comprehensive model of the stochastic network structure in cell in Java (8700+ lines).
-3D physical model of semiflexible polymer chain in Java (800+ lines).
-Image registration and shape finding in C++ and Matlab (1200+ lines).
-Monte-Carlo simulation of 3D particle system in Lennard-Jones potential in C++ and Matlab (600+ lines).
-Cluster/Parallel programming using High Performance Computing Linux clusters.
(Projects with visualizations: http://www.lehigh.edu/~hat310/prj.html)

Mathematics:
-Numerical solution to PDEs of stochastic system.
-Markov chain, Monte-Carlo methods, Random number generator.
-Stochastic process, Brownian Motion, Ito's calculus.
-Classical probability problems simulated in Matlab.
-Time series analysis and statistical regression.

Finance:
- Option pricing models (Binomial trees, Black-Scholes-Merton). Interest rate models (Vasicek, Hull-White, HJM). CAPM. Capital budgeting. Optimal portfolio theory. Value-at-Risk. Estimation of volatility using GARCH.
-Fixed income derivative and futures/options pricing using QuantLib.
-CFA Level III candidate.

Employment/Research:
1 paper published on high impact factor journal, 1 under review, 2 in preparation.
Research/Teaching assistant, Lehigh University 08/2010 – present
Summer Intern, Kenexa, an IBM company 08/2013 – 09/2013
Research undergraduate, University of Science and Technology of China 09/2009 – 06/2010
Research undergraduate, Shanghai Institute of Optics and Fine Mechanics, CAS 06/2009 – 08/2009