

GUANG ZHANG

Department of Economics, Boston University

270 Bay State Road

Boston MA 02215 USA

Cell: (857) 205-5326

Email: gzhang46@bu.edu

Web site: <https://sites.google.com/view/guangzhang46/>

EDUCATION

Ph.D., Economics, Boston University, Boston MA, May 2021 (expected)

Dissertation Title: *Essays on nonlinear filtering and its application in finance*

Main advisor: Zhongjun Qu

Dissertation Committee: Zhongjun Qu, Pierre Perron and Jean-Jacques Forneron

M.S., Economics, University of Wisconsin, Madison, WI, 2015

M.A., Economics, Hitotsubashi University, Tokyo, JAPAN, 2012

B.A., Japanese, Xi'an International Studies University, Xi'an, CHINA, 2008

FIELDS OF INTEREST

Financial Econometrics, Quantitative Finance, Mathematical Finance

WORKING PAPERS

“Quasi Monte Carlo Kalman Filter for Nonlinear and Non-Gaussian State Space Models,”
Job Market Paper, August 2020.

“Pairs Trading with Nonlinear and Non-Gaussian State Space Models,” *submitted*, June 2020.

“Hermite Polynomial Based Valuation of American Options with General Jump-Diffusion Process,” (with Li Chen), August 2020.

“Maximum Likelihood Estimation and Inference of Continuous Time Regime Switching Models: with Application on Treasury Bill Rates Data,” (with Anlong Qin and Li Chen), October 2019.

WORK IN PROGRESS

“Spot-future Arbitrage and Market Efficiency: a Quantamental Approach”

“Generalized Finite Mixture Approximation of the Transition Density of Jump-diffusion Process”

“Generalized Finite Mixture and Option Pricing”

“Pricing of American Option under Stochastic Volatility Models Based on Unscented Kalman filter”

“An Ant Colony Optimization Approach to the Valuation of American Option”

“A k -means Clustering Estimator for Nonparametric GARCH Models”

FELLOWSHIPS AND AWARDS

Dean's Fellowship and Teaching Fellowship, BU, 2015-2020

WORK EXPERIENCE

Research Assistant, Department of Economics, Boston University, Fall 2017- Fall 2020

TEACHING EXPERIENCE

Teaching Assistant, Department of Economics, BU

EC303/304 Empirical Economic Analysis (BA level), Spring 2017, Fall 2019

EC203/204 Empirical Economics (BA level), Fall 2016

LANGUAGES

Native in Mandarin, Fluent in English and Japanese

COMPUTER SKILLS: Python, R, C++, JavaScript, MATLAB, Stata

CITIZENSHIP/VISA STATUS: China/F1

REFERENCES

**Professor Zhongjun
Qu**

Department of Economics
Boston University
Phone: (617) 358-5921
Email: qu@bu.edu

**Professor Pierre
Perron**

Department of Economics
Boston University
Phone: (617) 353-3026
Email: perron@bu.edu

**Professor Jean-Jacques
Forneron**

Department of Economics
Boston University
Phone: (617) 353-4824
Email: jjmf@bu.edu