

## **GUANG ZHANG**

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### **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*, July 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), July 2020.

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

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