

# SHIH-SHENG CHANG



## EDUCATION

Current  
|  
2019



### MSc Candidate, Quantitative Economics

Christian-Albrechts-Universität zu Kiel

📍 Kiel, Germany

- Provisional Grade: 1.3 in German scale
- Focused on statistics, econometrics, and statistical learning

2021  
|  
2018



### MSc, Quantitative Finance

Christian-Albrechts-Universität zu Kiel

📍 Kiel, Germany

- Overall Grade: 1.6 in German scale
- Thesis: Multi-Asset Option Pricing under the Bates Model
- Focused on derivative pricing, risk management, and financial engineering

2018  
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2015



### BSc, Quantitative Finance (minor Economics)

National Tsing Hua University

📍 Hsinchu, Taiwan

- Overall GPA: 4.22/4.3 (equivalent to 1.0 in German scale)

2015  
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2014



### Study in Mathematics

National Central University

📍 Taoyuan, Taiwan

- Overall Average: 83/100



## RESEARCH EXPERIENCE

2018  
|  
2017



### Student Research Assistant

Chair Prof. Dr. Ching-Fan Chung's Lab 📍 National Tsing Hua University

- Cleaned and analyzed large data sets with Excel and R using data mining methods to construct statistical models
- Developed econometric models to quantify the economic factors in global stock and bond markets
- Mainly related to Receiver Operating Characteristic analysis, variable ordinalization, logistic regression, stepwise regression, credit scoring, and model assessment

## CONTACT

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Deutschland

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## LANGUAGE SKILLS

R

Matlab

Stata

Python

English (business fluent)

German (B1.1)

Chinese, Mandarin (native)

"I was simply amazed by how he raised quite a few essential questions and solved them with and sometimes without his teammates' help." — Supervisor



## INDUSTRY EXPERIENCE

2018  
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2017



### Research Assistant Intern

Eastspring Investments, Asset Management Company of Prudential plc (UK),

📍 Taipei, Taiwan

- Industry-University Cooperative Research Project with Prof. Dr. Ching-Fan Chung's Lab
- Analyzed strategies of quantitative global asset allocation to assist investment decision and product development
- Built R Shiny dashboards to visualize the model performance and backtesting results

"His logical and cordial manner greatly speed the project progress, since he could mitigate the gap of different parties' opinions by creative ideas accompanied with satisfactory statistical results." — Supervisor



## HONOR AWARDS

2018  
|  
2015



### Academic Achievement Award

~ 300 EUR

📍 National Tsing Hua University

- Five times awarded
- Top 5% of the class in the semester

2015  
|  
2014



### Academic Achievement Award

~ 150 EUR

📍 National Central University

- Top 5% of the class in the semester



## WORKS ON GITHUB

2021  
|  
2021



### Multi-Step-Ahead Analytic Moments of Mixed Normal GARCH(1,1)

- Codes of the multi-step-ahead analytic moments of Mixed Normal GARCH(1,1) model derived by Haas (2019)
- Applied to the method of Alexander et al. (2013) for computing multi-step-ahead risk estimates

2021  
|  
2020



### Bates Multi-Asset Quadratic Exponential (MQE) Scheme

- Extended the Heston MQE scheme proposed by de Innocentis et al. (2016) to the Bates (1996) stochastic-volatility jump-diffusion model
- Along with applications of multi-asset option pricing