Hongcheng Li

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EDUCATION

Peking University, Beijing, China   *09/2016-07/2020(expected)*

Bachelor of Arts in Economics, China Center for Economic Research

- **Academics:** GPA: 3.85/4.00 (91/100); Rank: 2/30
- **Core Economics Courses:** Intermediate Microecoomics, Intermediate Macroeconomics, Econometrics, Game Theory and Society, Behavioral Economics, Financial Economics, Data Analysis and Econometric Programming
- **Core Math Courses:** Probability Theory, Mathematical Statistics, Methods of Mathematical Physics (including complex analysis and partial differential equation), Differential Geometry, Financial Time Series Analysis, Theory of Dynamic Optimization
- **Computer Science Courses:** Introduction of Computation (C++), Data Structure and Algorithm (C), Pattern Recognition (Python), Methods of Computation (Python & Matlab)
- **Self-taught/Auditing Courses:** Real Analysis, Advanced Microeconomics, Game Theory (Grad-level), The Theory of Incentives, Web Data Scraping (Python), Textual Analysis and Machine Learning (Python)
- **Honors & Awards:** Guanghua Scholarship (Top 5%), Meritorious Prize in Mathematical Contest in Modeling (2017 MCM), China Economic Research Scholarship (National School of Development)

Peking University, Beijing, China   *09/2016-07/2017*

School of Physics

- **Academics:** GPA: 3.86/4.00 (91/100); Rank: 10/193

University of Maryland, College Park, MD, USA   *09/2019-12/2019*

Exchange Student, Department of Economics

- **Courses Undertaken:** Market Design, Abstract Algebra, Comparative Institutional Economics, Public Choice

RESEARCH EXPERIENCE

On Ex-Ante Asymmetry: Modeling Multi-Player Asymmetric War of Attrition   *09/2018-Present*

Advisor: Dr. Hao Wang and Dr. Xi Weng, Peking University, and Dr. Shinsuke Kambe, Gakushuin University

- Developed a multi-player asymmetric war of attrition with continuous-type incomplete information for the analysis of the private provision of public goods
- Proved the existence and uniqueness of the Bayesian equilibrium
- Demonstrated the stratified behavior pattern in the equilibrium: one instant exit and N-2 strict waitings
- Showed the decisive influence that the strongest type (the highest instant-exit type) has on social welfare
- Discussed the effects of two different forms of introducing asymmetry on social welfare
- Proposed to employ redistribution to improve the decision by a central party that interferes public-good provision
- The current progress of this research can be viewed via this link

Measuring Investors Sentiment   *10/2018-11/2018*

Advisor: Dr. Yan Shen, Peking University

- Labeled the sentiments and the expectations for two thousand stock-market comments crawled from a Chinese online forum, and also extracted keywords whereby the sentimental inclination of each comment is decided

- Identified using deep neural network (CNN) the correlation between textual keywords and investors' sentiments, and thus to evaluate and predict the aggregate expectation of the China stock market

Behavioral Collective Action: the Thousand Effect in China Stock Market *11/2018-present*

Advisor: Dr. Juanjuan Meng, Peking University

- Developed both theoretical and empirical models to analyze the round-number effect in the China stock market
- Demonstrated the phenomenal effect that a behavioral heuristic can have on the coordination of collective action
- The current progress of this research can be viewed via this link

Field Work in Economic Study *07/2018-07/2018*

Advisor: Dr. Jintao Xu , Peking University

- Led a field research team that studied the Chinese land institutions in Meibei Village, Jiangxi Province, China
- Predicted that the strengthened power of local authority in China's rural area will enhance economic performance whereas meanwhile engendering the imbalance of rural governance structure

SELECTED COURSE PROJECTS

Robust Equilibrium (access via this link)

- Formulated a novel refinement notion for the evaluation of the robustness of equilibrium
- Provided examples to show what is missing in the previous literature and how the version can fill the vacancy

Font Recognition (access via this link on GitHub)

- Realized font recognition with Python and compared various feature extraction methods (PCA, DAISY)
- Analyzed the learning patterns of various models (including but not limited to SVM, DT, CNN)

Self-Programmed Role-Playing Game (access via this link)

- Created a campus-version *Pokemon* with C++ (data structure and AI algorithm) and QT (user interface)
- Developed a 2v2 turn-based battle mode on a 5×5-chessboard

SKILLS

- **Programming Languages:** Python, STATA, Matlab, R, C++, Eviews, LINGO, LaTeX
- **Programming Skills:** Machine Learning, Deep Learning, Web Data Scraping, Text Mining
- **Books Learned by Myself:**
  - Economics: *Game Theory* (Fudenberg and Tirole, 1991), *The Theory of Incentives* (Laffont and Martimort, 2009), *Applied Econometric Time Series* (Enders, 2012), *Institutions, Institutional Change and Economic Performance* (North, 1990), *Governing the Commons* (Ostrom, 2015), *Misbehaving* (Thaler, 2015)