Zhouzhou Gu

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EDUCATION

- **Peking University** — Beijing, China
  B.S. in *Physics*, B.A. in *Economics*. GPA: 3.80 (Overall), 3.91/4.0 (Major) — Sep. 2018 – June 2022
  Featured Courses: Analysis I&II, Function of Real Variables, Complex Analysis, PhD Stochastic Analysis, PhD Group Theory, Partial Differential Equations, Ordinary Differential Equations, Linear Algebra, Probability and Statistics, Numerical Analysis; PhD Macro Theory I&II (at Princeton), PhD Micro Theory I&II, PhD Econometrics I, PhD Macro-Finance & Monetary Economics & Macroeconomics With Agent Heterogeneity (at Princeton), PhD Corporate Finance Theory, PhD Contract Theory, Industrial Organization

CURRENT POSITION

- **Senior Research Specialist (Predoc), Bendheim Center for Finance, Princeton University** — NJ, USA
  Advisor: Prof. Jonathan E. Payne & Prof. Markus K. Brunnermeier. — Sep. 2022 – Present
  Field: *Macro-finance, Heterogeneous Agent, ESG, Machine learning.*

RESEARCH INTEREST

Macro-finance, Macroeconomics, Heterogeneous Agent, Banking

WORKING PAPERS

- **Deep Learning Solutions to Master Equations for Continuous Time Heterogeneous Agent Macroeconomic Models** (with Jonathan E. Payne, Mathieu Laurière and Sebastian Merkel).
  Presentation: *Society of Economic Dynamics Annual Meeting, Society of Computational Economics Annual Meeting, Dynamic Structural Economics 2023, Princeton, UC Berkeley, USC Marshall, IMSI.*

- **Deep Learning for Solving and Estimating Dynamic Macro-Finance Models** (with Wenhao Li, Lu Lu, Benjamin Fan, Eddie Qiao and Anran Jiao). *Minor Revison Requested by* **Computational Economics**

- **Housing and Inequality (with Jonathan E. Payne)**. Draft coming soon.
  Presentation: *USC Marshall, Princeton*

- **Bank Opacity, Leverage Spirals and Optimal Regulation (with Haotian Xiang)**. Draft coming soon.

WORK IN PROGRESS

- **Optimal Green Transition (with Markus Brunnermeier and Sebastian Merkel)**.

SELECTED RESEARCH EXPERIENCE

- **Marshall School of Business, University of Southern California** — Remote
  Research Assistant to Prof. Wenhao Li — June 2021 - June 2022

- **Department of Physics, Peking University** — Beijing, China
  Independent Research supervised by Prof. Xuzong Chen — Feb. 2020 - Oct. 2021
  Honor Thesis: Essays on Ultra-cold Atom Physics and Dynamic Quantum Phase Transition

SELECTED HONORS AND AWARDS

- First Prize in National Undergraduate Math Contest — 2021
- China Economics Research Scholarship — 2021
- Benz Scholarship (Top 5%) — 2021
- Merit Student (Top 5%) — 2021, 2020
- Peking University First Prize Scholarship (Top 2%) — 2020
- Academic Excellent Award — 2019

- Gold Medal in 19th Asian Physics Olympiad   2018
- Gold Medal in 34th Chinese Physics Olympiad (selected to **Chinese National Team**)   2017

ADDITIONAL EXPERIENCE

- **Teaching Assistant for (ECO529) Money, Macro and Finance (2nd year PhD)**   Princeton University
  Instructor: Prof. Markus K. Brunnermeier   Fall 2023
- **Teaching Assistant for Continuous Time Macro-finance (1st year PhD) [TA Slides]**   Princeton University
  Instructor: Prof. Markus K. Brunnermeier   Summer 2023
- **Teaching Assistant for Undergraduate Microeconomic Theory**   Peking University
  Instructor: Prof. Xin Wang   Fall 2021

ADDITIONAL INFORMATION

- **Programming**. Python (Pytorch), R, C++, Matlab, LaTeX, Julia, Stata
- **Language**.   Chinese (native), English (fluent)
- **Test Scores**.   TOEFL: 109 (Speaking 25), GRE: 156(V)+170(Q)+4.5(AW)

REFERENCES

Prof. Markus K. Brunnermeier   Prof. Jonathan E. Payne
Department of Economics   Department of Economics
Princeton University   Princeton University
New Jersey, 08544   New Jersey, 08544
✉ markus@princeton.edu   ✉ jepayne@princeton.edu

Prof. Wenhao Li   Prof. Haotian Xiang
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