

# Yucheng Yang

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|-------------------------------|-------------------|--|--------------|
| <b>Placement Director</b>     | Gianluca Violante | <a href="mailto:violante@princeton.edu">violante@princeton.edu</a> | 609-258-4003 |
| <b>Graduate Administrator</b> | Laura Hedden      | <a href="mailto:lhedden@princeton.edu">lhedden@princeton.edu</a>   | 609-258-4006 |

## Office Contact Information

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Julis Romo Rabinowitz Building  
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Princeton University  
Princeton, NJ 08544

## Graduate Studies

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| <b>Princeton University</b>   | <i>2017-2023 (expected)</i> |
| PhD Candidate in PACM (Interdisciplinary PhD program)                                   |                             |
| Dissertation: “ <i>Macroeconomics and Heterogeneous Reality with Machine Learning</i> ” |                             |

### REFERENCES

|  |   |
|--|---|
| Professor Gianluca Violante<br>Department of Economics<br>Princeton University<br>609-258-4003<br><a href="mailto:violante@princeton.edu">violante@princeton.edu</a> | Professor Weinan E<br>Department of Mathematics<br>Princeton University<br>609-258-3683<br><a href="mailto:weinan@princeton.edu">weinan@princeton.edu</a>           |
| Professor Christopher Sims<br>Department of Economics<br>Princeton University<br>609-258-4033<br><a href="mailto:sims@princeton.edu">sims@princeton.edu</a>          | Professor Jonathan Payne<br>Bendheim Center for Finance<br>Princeton University<br>609-258-9444<br><a href="mailto:jepayne@princeton.edu">jepayne@princeton.edu</a> |

## Prior Education

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| <b>University of Wisconsin-Madison</b> | <i>2015-2017</i> |
| M.A. in Economics                      |                  |
| <b>Peking University</b>               | <i>2011-2015</i> |
| B.S. in Statistics, B.A. in Economics  |                  |

## Fields

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| PRIMARY   | Macroeconomics, Machine Learning, Finance                 |
| SECONDARY | Monetary Economics, Data Science, Computational Economics |

## Job Market Paper

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“Redistributive Inflation and Optimal Monetary Policy.” 2022.

**Abstract:** *Inflation has heterogeneous impacts on households, which then affects optimal monetary policy design. I study optimal monetary policy rules in a heterogeneous agent New Keynesian (HANK) model where inflation has redistributive effects on households through their different (1) consumption baskets, (2) nominal wealth positions, and (3) earnings elasticities to business cycles. I parameterize the model based on the empirical analysis of these channels using the most recent data. Unlike in representative agent models, a utilitarian central bank should adopt an asymmetric monetary policy rule that is accommodative towards inflation and aggressive towards deflation. Specifically, by accommodating stronger demand and higher inflation, the central bank benefits low-income and low-wealth households through nominal debt devaluation and higher earnings growth.*

## Other Working Papers

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1. “DeepHAM: A Global Solution Method for Heterogeneous Agent Models with Aggregate Shocks.” with Jiequn Han and Weinan E. 2021.

**Selected presentations:** Stanford, Philly Fed, PKU, CICM.

2. “The Knowledge Graph for Macroeconomic Analysis with Alternative Big Data.” with Yue Pang, Guanhua Huang and Weinan E. 2020.

**Selected presentations:** FRB-Banca d’Italia Conference, Her Majesty’s Treasury, SoFiE Machine Learning Workshop, Philly Fed.

**Media Coverage:** Quantpedia.

3. “Networks, Business Cycles, and Asset Pricing” with Wu Zhu. 2020.

## Work in Progress

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1. “Endogenous Disaster and Asset Pricing in HANK.” with Gianluca Violante. 2022.
2. “DeepHANK.” with Jiequn Han and Gianluca Violante. 2022.
3. “Financial Frictions and Dynamic Equity Network Formation in China.” with Jeff Cai, Xian Gu, Wei Xiong, Linda Zhao, and Wu Zhu. 2022.

## Conference and Seminar Presentations (including scheduled)

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| 2023 | AEA (discussant, “AI in Economics” session)  |
| 2022 | Stanford, Princeton, UPenn, Federal Reserve Bank of Philadelphia Frontiers in Machine Learning and Economics Conference, Philly Fed Young Scholars Conference on Machine Learning in Economics and Finance, Peking University, Tsinghua SEM, Monash-Warwick-Zurich Text-as-Data Workshop, CICM, NASMES (Miami Herbert), AMES (CUHK Shenzhen), CEA (Carleton), T2M (King’s College London). |
| 2021 | Her Majesty’s Treasury (UK), SoFiE Machine Learning Workshop, Princeton, RES, ESCoE, AMES (Curtin).  |

pre 2020 Banca d'Italia and Federal Reserve Board Conference in Macroeconomics, IWH-CIREQ-GW Macroeconometric Workshop, National Bureau of Statistics of China, Princeton, 4th International Symposium on New Structural Economics.

## Teaching

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*Instructor* PhD Macroeconomic Perspectives on Inequality (Guest lecturer, Fall 2021)  
**Macroeconomic Analysis with Machine Learning & Big Data** (Instructor, Summer 2019)

*TA/Grader* Intermediate Macroeconomics (Princeton, Spring 2021)  
Mathematical Introduction to Machine Learning (Princeton, Fall 2018)  
Chinese Financial and Monetary Systems (Princeton Master in Finance, Fall 2019&2020)  
Introduction to Differential Equations (Princeton, Spring 2020)  
PhD Macroeconomics II (UW-Madison, Spring 2017)  
Master Macroeconomics I (UW-Madison, Spring 2016)  
Master Econometrics I (UW-Madison, Fall 2015)

## Professional Activities

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### Session Chair

RES 2021, 2021 ES Asian Meeting, 2022 ES North American Meeting, 2022 CEA.

### Refereeing

*Journal of Economic Dynamics and Control*

## Selected Honors and Grants

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| AFA Travel Grant Award, American Finance Association         | 2023      |
| Academic Travel Grants, Princeton University                 | 2019-2022 |
| Philip G. Terrie '39 Fellowship, Princeton University        | 2017      |
| IRP Graduate Research Fellowship, UW-Madison                 | 2015-2017 |
| Leadership Scholarship, CCER, Peking University              | 2015      |
| Tsung-Dao Lee & Hui-Chun Chin Scholarship, Peking University | 2013-2015 |
| CSST Scholarship, UCLA                                       | 2014      |
| Academic Excellent Award, Peking University                  | 2013      |
| CF40-Road King Scholarship, CCER, Peking University          | 2012-2015 |

## Languages

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Mandarin (native), English; Python (TensorFlow, PyTorch), Matlab, R, Stata, L<sup>A</sup>T<sub>E</sub>X.

*Last updated: November 17, 2022*