

Placement Director: Professor Alessandro Pavan 847-491-8266 alepavan@northwestern.edu
 Placement Administrator: Lola Ittner 847-491-5213 econjobmarket@northwestern.edu

**CONTACT
INFORMATION**

Department of Economics
 Northwestern University
 2211 Campus Drive
 Evanston, IL 60208

Mobile: 832-758-7670
michaelcai@u.northwestern.edu
www.michaelcai.com
 Citizenship: USA

**RESEARCH
INTERESTS**

Macroeconomics, Behavioral Economics, Time-series Econometrics

EDUCATION

Ph.D in Economics, Northwestern University 2025 (expected)
 Committee: Matthias Doepke (Chair), George Marios Angeletos, Matthew Rognlie
 B.S. *summa cum laude* in Economics, New York University Stern School of Business 2017

**JOB MARKET
PAPER****HANK with Actual Expectations Solves the Persistence Puzzle**

Inertial responses of aggregate variables to unexpected shocks is a key business cycle fact. Textbook macroeconomic models lack mechanisms that enhance the persistence of shocks and thus struggle to rationalize this fact without additional features. I show that perpetual youth and standard incomplete markets models — the core of modern HANK models — can match this fact with one simple change: replace model expectations with expectations data. Many existing theories of expectation formation cannot match patterns of bias in expectations data but a simple Bayesian learning model can explain them. Building on this, I characterize a novel mechanism that produces endogenous persistence in HANK models with learning. Inertia results from delayed amplification of an initial shock due to the gradual unanchoring of expectations. I consider two key dimensions of systematic policy 1) responsiveness to fluctuations, e.g. the slope of the Taylor rule, and 2) time length of government debt rollover and show that the length of lags vary with these choices.

**SELECTED
WORKS IN
PROGRESS****Optimal Long-Run Fiscal Policy with Heterogeneous Agents**

(with Adrien Auclert, Matthew Rognlie, and Ludwig Straub)

We introduce a new method for characterizing the steady state of dynamic Ramsey problems, building on the dual approach to optimal taxation. Applying this method to standard calibrations of heterogeneous-agent models à la Aiyagari (1995), we find that in many cases Ramsey steady states do not exist, with our results suggesting that long-run immiseration is optimal instead. When Ramsey steady states do exist, they are associated with optimal long-run labor income taxes close to 100%. We show that these conclusions are related to strong anticipatory effects of future tax changes.

PUBLICATIONS**Online Estimation of DSGE Models**

(with Marco Del Negro, Edward Herbst, Ethan Matlin, Reza Sarfati, and Frank Schorfheide)
The Econometrics Journal: Volume 24, Issue 1, Jan 2021, Pg. C33-C58

DSGE Forecasts of the Lost Recovery

(with Marco Del Negro, Marc P. Giannoni, Abhi Gupta, Pearl Li, and Erica Moszkowski)
International Journal of Forecasting: Volume 35, Issue 4, Oct-Dec 2019, Pg. 1770-1789

AWARDS

Alfred P. Sloan Foundation Pre-Doctoral Fellowship in Behavioral Macroeconomics 2023-2025
 Graduate Fellowship (Northwestern University) 2019-23
 Award for Excellence in Economics (Single awardee from NYU Stern) 2017

RESEARCH EXPERIENCE	Research Assistant, Prof. Matthias Doepke, Northwestern University	2022-23
	Research Assistant, Prof. Matthew Rognlie, Northwestern University	2021-22
	Senior Research Analyst, Dr. Marco Del Negro, Federal Reserve Bank of New York	2017–19
	Research Assistant, Prof. Tim Christensen, New York University	2016-17
TEACHING EXPERIENCE	Intermediate Macroeconomics, Prof. Mark Witte, Northwestern University	2023
	Intermediate Macroeconomics, Prof. Giorgio Primiceri, Northwestern University	2021
OTHER EXPERIENCE	Visiting Scholar, Federal Reserve Bank of Chicago	2024
	Research Officer, International Monetary Fund	2022
PROGRAMMING	Python, Julia, Matlab	
LANGUAGES	English (native), Chinese (basic)	
REFERENCES	Professor Matthias Doepke Department of Economics London School of Economics Houghton Street London, England WC2A 2AE m.doepke@lse.ac.uk	Professor George Marios Angeletos Department of Economics Northwestern University 2211 Campus Drive Evanston, IL 60208 angeletos@northwestern.edu
	Professor Matthew Rognlie Department of Economics Northwestern University 2211 Campus Drive Evanston, IL 60208 matthew.rognlie@northwestern.edu	

Last updated: October 2024