### RONG FAN

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#### INDIANA UNIVERSITY BLOOMINGTON

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#### Office Contact Information:

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# Undergraduate and Masters Education:

B.A. in National Economic Management, Renmin University of China, Beijing, China, 2016 M.A. in Behavioral Economics, University of Montpellier, Montpellier, France, 2017

#### **Doctoral Studies:**

Indiana University Bloomington, 2017 to present

Ph.D. Candidate in Economics

Thesis Title: "Essays on Human Capital and Technology"

Expected Completion Date: June 2023

References:

Bulent Guler (Co-chair) Todd B. Walker (Co-chair) Department of Economics, IUB Department of Economics, IUB bguler@iu.edu, 812-855-7791 walkertb@iu.edu, 812-856-2892

Rupal Kamdar Laura Liu

Department of Economics, IUB Department of Economics, IUB rkamdar@iu.edu, 812-855-4203 lauraliu@iu.edu, 812-856-1238

## Teaching and Research Fields:

Primary Fields: Macro Labor, Economic Growth Secondary Fields: Macroeconomics, Monetary Policy

#### Teaching Experience:

Fall 2022 Undergraduate Intro to Macroeconomics Head teaching assistant for Prof. James Self

Fall 2021 Undergraduate Fund of Economics for Business II

Associate instructor

Summer 2021 Undergraduate Intro to Applied Econometrics

Graduate assistant for Prof. John Stone

Summer 2021 Undergraduate Fund of Economics for Business I

Graduate assistant for Prof. John Stone

Spring 2020, 2021, 2022 Graduate Macroeconomic Theory

Associate instructor for Prof. Bulent Guler

Fall 2018, 2019, 2020, Spring 2019 Undergraduate Intro to Macroeconomics

Associate instructor

Undergraduate Intro to Microeconomics Spring 2018

Graduate assistant for Prof. Gerhard Glomm

Fall 2017, Summer 2021 Undergraduate Intro to Microeconomics

Graduate assistant for Prof. Paul Graf

## Research Experience:

Summer 2021, 2022 Indiana University Bloomington,

Research Assistant for Prof. Todd B. Walker

Summer 2017 Organisation for Economic Cooperation and Development (OECD)

Research Intern

#### **Professional Activities:**

Presentations: IU seminar, EEA (2022), SEA (2022)

### Honors, Scholarships, and Fellowships:

2020-2021 Fred & Judy Witney Scholarship 2020-2021 Witney LeMar Fellowship 2021-2022 Taulman A. Miller Award

Fall 2022 College of Arts and Sciences Travel Award

# Research Papers in Progress:

"Interaction between Automation and Human Capital: Labor Share and Inequality" (Job Market Paper)

Abstract: This paper studies how human capital responds to technological revolution since human capital is essential for understanding how labor share, wage premium, and inequality change in the era of automation. I develop a theoretical model by introducing heterogeneous workers (skilled and unskilled) and endogenous human capital to a task model framework. I calibrate the model to fit the data between 1980 and 2005 and discuss the policy implications. First, I find that human capital and automation are racing against each other. Human capital accumulation decreases the automation level and increases the labor share by 0.33%. Second, uneven responses of skilled and unskilled workers amplify inequality, explaining 77% of the wage premium increase. Industry and occupation-level data confirm the implications of the model. Automation has a positive effect on overall skill levels and training investment. The responses of human capital to automation of skilled and unskilled workers are significantly different.

### "Jobless Recovery and Skill Mismatch"

Abstract: In a business cycle model with search and matching frictions, I explain the slow jobless recovery after the Great Recession to be the result of a mismatch between worker skill and firm technology. The mismatch increases both the level and volatility of unemployment, while it decreases the labor force participation rate, mainly by increasing the probability of matching failure. I extend the model by allowing workers and firms to endogenously adjust their skill and technology levels. Endogenous skill and technology amplify the mismatch fluctuation, especially when the return to capital is high and the cost of technology adoption is significantly lower than the cost of training. By calibrating the full model to match the 1987-1993 and 2007-2013 data, I find an increased mismatch in 2007-2013. Counterfactual experiments show that unemployment insurance can improve the matching quality, and subsidies to training can reduce the mismatch by stimulating the human capital investment. Using state-level data, I find that mismatch is vital in explaining the state variation of the unemployment rate and volatility.

"Central Bank Digital Currency in Small Open Economies" with Todd Walker, Wayne Robinson and Allan Wright