

**SEOKIL KANG**  
**INDIANA UNIVERSITY**  
**Curriculum Vitae**  
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**CONTACT INFORMATION**

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**EDUCATION**

Ph.D. Economics,	Indiana University,	May 2022 (Expected)
	Thesis Title: “ <i>Essays on Computation and Empirical Macroeconomics</i> ”	
M.A. Economics,	Yonsei University,	2016
B.A. Economics,	Yonsei University,	2014

**RESEARCH FIELDS**

Macroeconomics, Monetary and fiscal policy, Bayesian econometrics

**WORKING PAPERS**

[\*Quantifying the Fiscal Backing for Monetary Policy\*](#) (Job Market Paper)

I ask to what extent can data reveal whether fiscal policy responses to monetary policy shock are consistent with the theoretical adjustments necessary for successful inflation-targeting monetary policy. I employ a DSGE model to estimate the fiscal response to a monetary policy shock under the active monetary and passive fiscal policy regime. A monetary contraction raising interest rate by 25 basis points reduces the market value of government debt by 0.8% because the bond price devaluation outweighs the fall in inflation. This reduction splits into a 1.7% decline due to higher discount rates and a 0.9% increase in expected primary surpluses. I also estimate a VAR that takes an agnostic view on the policy regime to examine how closely the data conforms to the theory. I find that the data accounts for 90% of the primary surplus response dictated by theory, suggesting that the data reveals the presence of fiscal backing for monetary policy.

[\*Simulated Annealing Multiplicative Weights Algorithm for Solving a DSGE Model\*](#)

This paper introduces a simulation-based adaptive algorithm to solve a DSGE model with a large state space, namely the curse of dimensionality. It aims to generate a stationary distribution over policy space which is concentrated on the optimal policy. The key strategy is to construct a finite policy space of heuristic policies. To update the distribution over policy space, the method adopts on-line computation via iterative simulation with emphasis on rolling-horizon control to foster the speed of algorithm. Subsequently, I deliver that the algorithm achieves theoretical convergence to the optimal value function and the stationary distribution over policy space is concentrated on the optimal policy. Application to solve the simple two-period RBC model follows as a sample exercise. The result shows the performance is desirable within the feasible number of iterations and size of restricted policy space respectively.

## **TEACHING, RESEARCH EXPERIENCE**

Teaching Assistant	Intro to International Trade, Prof V. Lugovskyy Macroeconomics I(Ph.D.), Prof J. Bernstein	Fall 2017 Fall 2019, 2020, 2021
Associate Instructor (Full teaching responsibilities)	Method of Economic Analysis Intermediate Macroeconomics Theory Statistical Analysis for Business and Economics Macroeconomics I(Master)	Spring 2018 Fall 2018 Spring 2019, 2020 Spring 2021
Research Assistant	Prof T. Walker	Summer 2018, 2019

## **PRESENTATION**

2021	KERIC (virtual), SEA Annual Meeting (Houston), Macro Brownbag (Indiana University)
2019	Hoosier Economics Conference (Indiana University)

## **COMPUTATION SKILLS**

Julia, Matlab, Stata, HPC cluster, Dynare

## **SCHOLARSHIPS, AND FELLOWSHIPS**

2021	Daniel J. Duesterberg Award, Indiana University
2021	F & E Payne Fellowship, Indiana University
2016 - present	Teaching Assistantship, Indiana University
2016 - 2017	Top-up Fellowship, Indiana University
2016 - 2017	Graduate Fellowship, Indiana University

## **PERSONAL INFORMATION**

Citizenship: South Korea (F1-visa: STEM certified 3-year OPT)  
Date of birth: July 16, 1988  
Language: Korean(native), English(fluent)  
Military Service: ROKAF, Honorable Discharged (2009.04 – 2011.05)

## **REFERENCES**

Professor Todd B. Walker (Co-chair) Indiana University <a href="mailto:walkertb@iu.edu">walkertb@iu.edu</a> 812-856-2892	Professor Eric M. Leeper (Co-chair) University of Virginia <a href="mailto:eml3jf@virginia.edu">eml3jf@virginia.edu</a> 434-924-3933
Professor Christian Matthes Indiana University <a href="mailto:matthes@iu.edu">matthes@iu.edu</a> 812-855-3567	Professor Laura Liu Indiana University <a href="mailto:lauraliu@iu.edu">lauraliu@iu.edu</a> 812-856-1238
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