

CONTACT  
INFORMATION

youngahn@sas.upenn.edu  
<https://bayesiahn.github.io/>

## EDUCATION

**University of Pennsylvania**

Ph.D., Economics, September 2020 –  
 (2021–2022: Leave of Absence Due to Military Service in Korea)

**University of British Columbia**

B.Sc., Mathematics (with Distinction), May 2015 – May 2017.  
 B.A., Economics, May 2012 – November 2014.

WORKS IN  
PROGRESS

1. **Difference-in-Differences with Latent Group Structures** (with Hiroyuki Kasahara)  
**Presented in:** Labor, Firms, and Macro Reading Group 2023, California Econometrics Conference 2023, CESG 2023.
  2. **Bytes to Balance: Technology, Skill Accumulation, and Inequality in Competitive Environments**  
**Presented in:** AASLE 2023.
  3. **On Policy Shocks under Equilibrium Responses** (with Francesco Agostinelli)
  4. **Difference-by-Transitions: Theory and Applications in Program Evaluation**
  5. **Recovering Treatment Effects Heterogeneity by Differences**
  6. **Finite Mixture Regression Models for Treatment Effect Parameters with Many Regressors** (with Hiroyuki Kasahara)  
**Presented in:** EcoSta 2021.
  7. **Learning How Policymakers Rank**  
**Presented in:** CESG 2019.
- (\*: Scheduled)

## SOFTWARE

1. **groupdid** (with Hiroyuki Kasahara)  
 R package for difference-in-differences estimation when parallel trends assumptions do not hold.  
 Available at <https://github.com/bayesiahn/groupdid>.
2. **normalregMix** (with Hiroyuki Kasahara and Katsumi Shimotsu)  
 R package for estimation of normal mixture regression models and testing the number of components.  
 Available at <https://github.com/hkasahar/normalregMix>.
3. **rMSWITCH** (with Hiroyuki Kasahara and Katsumi Shimotsu)  
 R package for estimation of Markov regime-switching models and testing the number of regimes.  
 Available at <https://github.com/chiyahn/rMSWITCH>.
4. **mixPanel**  
 R package for estimation of dynamic linear mixture panel data models.  
 Available at <https://github.com/chiyahn/mixPanel>.
5. **SimpleDifferentialOperators.jl** (QuantEcon)  
 Julia package for solving differential equations by numerical discretization. I worked on derivation (with Jesse Perla), implementation, documentation, tutorials, and complete examples.  
 Available at <https://github.com/quantecon/SimpleDifferentialOperators.jl>.

RESEARCH  
EXPERIENCE**Research Assistant**

Department of Economics, University of Pennsylvania  
 Supervisor: Andrew Shephard

October 2023 –

	<b>Contributor</b> QuantEcon Numerical solutions for heterogenous agent models in macroeconomics.	January 2019 –
	<b>Research Assistant</b> Vancouver School of Economics, University of British Columbia Supervisor: Giovanni Gallipolli	July 2019 – June 2020
	<b>Predoctoral Fellow</b> Vancouver School of Economics, University of British Columbia Supervisor: Jesse Perla	August 2018 – June 2020
	<b>Research Assistant</b> Bank of Canada Supervisor: Heng Chen	June 2017 – July 2018
	<b>Research Assistant</b> Vancouver School of Economics, University of British Columbia Supervisor: Hiroyuki Kasahara	May 2016 – June 2017
	<b>Research Intern</b> Korea Labour & Society Institute	October 2014 – January 2015
TEACHING EXPERIENCE	<b>Guest Lecturer</b> ECON 628 - Topics in Applied Econometrics I (UBC) Lecture on data analysis and auto-differentiation for second-year graduate students.	January 2017 – April 2017
	<b>Teaching Assistant</b> ECON 2310 - Econometric Methods and Models (Penn) Supervisor: Xu Cheng ECON 4320 - Microeconometrics (Penn) Supervisor: Petra Todd ECON 0100 - Introduction to Microeconomics (Penn) Supervisor: Anne Duchene CPSC 303 - Numerical Approximation and Discretization (UBC)	Fall 2023  Spring 2023  Fall 2022  Spring 2017
PRESENTATION	<b>2023:</b> Labor, Firms, and Macro Reading Group, CESG, Penn, AASLE. <b>–2022:</b> CESG, Penn.	
SELECTED GRADUATE COURSEWORK	University of British Columbia Computer Science: convex analysis and optimization. Mathematics: optimal transportation, real analysis, functional analysis, probability theory I/II. Statistics: asymptotic statistics, statistical theory I/II, machine learning theory.	
HONOURS & AWARDS	University of British Columbia Dean's Honour List (x2) NSERC Undergraduate Student Research Awards NSERC Undergraduate Student Research Awards* Graduation with Distinction Financial assistantship for the economics MA program in UBC* (*: Offered, but declined for another job offer.)	2015 – 2017 May 2016 May 2017 May 2017 March 2018
	Others Service for the Republic of Korea Army (Sergeant, served in an artillery battalion)	2020 – 2022
SKILLS	Computer programming: C/C++, Julia, MATLAB, Python, R, Stata, shell scripting, multi-cluster computing with MPI, version controls with Git, GNU Make. Foreign languages: Korean (native) Japanese (advanced / certified with JLPT N1; 2022) Mandarin (advanced / certified with HSK Level 6; 2020) Literary Chinese (intermediate)	