



Stony Brook
University

Department of Economics

Job Market Packet

2024-2025

Fall 2024 Edition



Stony Brook University

Department of Economics

Social & Behavioral Science Building, 6th Floor
Stony Brook, New York 11794-4384

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October 2024

Dear Colleague:

Please find enclosed a packet containing information about our students on the job market. It contains two summary sheets: the first identifies the research and teaching interests of our students on the market this year, and the second indicates their respective advisors. A curriculum vitae of each student are also included. All of these students plan to defend their dissertations by next summer.

Reference letters can be obtained from our Placement Administrator, Tim Chin, by email: timothy.chin@stonybrook.edu or graduate_economics@stonybrook.edu.

We would appreciate hearing from you about your personnel requirements. Please feel free to contact me if you need more detailed or specific information.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven Stern".

Steven Stern
Professor of Economics
Placement Committee, Chair
steven.stern@stonybrook.edu

A handwritten signature in black ink, appearing to read "Chang Liu".

Chang Liu
Assistant Professor of Economics
Placement Committee, Member
chang.liu.11@stonybrook.edu

Research Interests

	Ahmad Al Khawaja	Aneesh Arora	Hualong Diao	Lei Li	Zhu Liang	Takahiro Moriya	Mansi Sharma	Kwanjai Yoo
Applied Game Theory	S					S		
Applied Microeconomics		P	P			S	P	
Artificial Intelligence and Machine Learning	S							
Car Market								
Consumption								
Cybersecurity Economics			S					
Demography							S	
Development Economics							P	
Empirical Industrial Organization		P			P	S		
Empirical Microeconomics		S						
Gender Economics							P	
Health Economics			P		S			
Household Finance								S
International Finance				P				
Labor Economics			S			P		S
Macroeconomics				S				P
Microeconomic Theory						P		
Political Game Theory	P							
Product Design					S			
Quantitative Marketing		S						
Social and Economic Networks	S							
Theoretical Industrial Organization	S							

P: indicates primary field
S: indicates secondary field

Stony Brook University

Department of Economics

Stony Brook, New York 11794-4384

Summary Sheet of Students & Their Respective Advisors

Ahmad Al Khawaja

Yair Tauman*
Pradeep Dubey
Eran Shmaya

Aneesh Arora

Hugo Benitez-Silva*
Sandro Brusco
Ting Liu

Hualong Diao

Steven Stern*
Mark R. Montgomery
Sandro Brusco

Lei Li

Juan Carlos Conesa*
Gabriel Mihalache
Marina Azzimonti

Zhu Liang

Yiyi Zhou*
Steven Stern
Ting Liu

Takahiro Moriya

Steven Stern*
Ting Liu
Pradeep Dubey
Sandro Brusco

Mansi Sharma

Steven Stern*
Mark R. Montgomery
Hugo Benitez-Silva

Kwanjai Yoo

Juan Carlos Conesa*
David Wiczer
Eva Carceles-Poveda

* indicates the Primary Advisor for student

Ahmad Alkhawaja

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Email: ahmad.alkhawaja@stonybrook.edu

LinkedIn: www.linkedin.com/in/ahmadalkhawajagt

Phone: +1 (716) 513-4184

EDUCATION

Ph.D. in Economics , Stony Brook University, USA	2019 - 2025 (expected)
M.Sc. in Economics , University at Buffalo, USA	2017 - 2019
Master of Business Administration , American University of Sharjah, UAE	2014 - 2016
B.Sc. in Computer Engineering , American University of Sharjah, UAE	2007 - 2011

RESEARCH INTERESTS

Political Game Theory, Industrial Organization, Applied Game Theory, Social and Economic Networks, and Artificial Intelligence and Machine Learning.

WORKING PAPERS

[Strategic Conflict Between Two Groups of Players: The Non-Cooperative Approach](#) (Job market paper).

WORK IN PROGRESS

Strategic Conflict Between Two Groups of Players: The Quadratic-Cost Extension.

Strategic Conflict Between Two Groups of Players: The Cooperative Approach.

TEACHING EXPERIENCE

Instructor (Stony Brook University):

Mathematical Statistics, Game Theory (Online), Intermediate Microeconomic Theory (Upcoming).

Teaching Assistant (Stony Brook University):

Mathematical Statistics, Intermediate Microeconomic Theory, Data Science and Machine Learning in Economics, Intermediate Macroeconomic Theory, Introduction to Economics.

Teaching Assistant (American University of Sharjah):

Object-Oriented Programming for Business Applications, Advanced Digital System Design, Digital Systems, Introduction to Computer Science I, Introduction to Computer Science II.

RESEARCH PROJECTS

Stony Brook University

2020 - 2023

- Development of dynamic model solutions and simulations using various techniques in both Python and MATLAB.
- Automated Driving using Deep Q-Learning.
- Cournot Competition and Firm Learning: algorithms for agent-based models.

American University of Sharjah

2014 - 2016

- Data collection and analysis of bankruptcy data of US companies using SAS and SQL.
- Strategic analysis of Amazon's forward integration.
- A study of talent management systems in the UAE and the GCC region.
- Integrating peer-to-peer inquiry-based learning with a crowd-sourcing platform (in [ED-ULEARN14](#) Proceedings).

WORKING EXPERIENCE AND SERVICE

Software Developer, Microsystems L.L.C., UAE

2011 - 2013

Administrator, Stony Brook Center for Game Theory

October 2020 - December 2022

SKILLS

Software: C++, Python, MATLAB, R, C#, Java, VB, PHP, SAS, SQL, and \LaTeX .

Languages: English (fluent), Arabic (native), and French (intermediate).

CONFERENCE PRESENTATIONS

2024: 35th Stony Brook International Conference on Game Theory.

REFERENCES

Yair Tauman (Main Advisor)

Department of Economics

Stony Brook University

E-mail: yair.tauman@stonybrook.edu

Pradeep Dubey (Co-Advisor)

Department of Economics

Stony Brook University

E-mail: pradeep.dubey@stonybrook.edu

Eran Shmaya

Department of Economics

Stony Brook University

E-mail: eran.shmaya@stonybrook.edu

Hugo Benitez-Silva (Teaching Reference)

Department of Economics

Stony Brook University

E-mail: hugo.benitez-silva@stonybrook.edu

ABSTRACTS

Strategic Conflict Between Two Groups of Players: The Non-Cooperative Approach

The paper studies a two-stage conflict game between two groups of players. In the first stage, each player independently of all other players chooses how much monetary effort to spend defending himself. In the second stage, each player decides how much effort to spend attacking players in the other group. Players can use their resources differently, and their effectiveness varies for the same dollar spent. The chance of winning a battle against a player in the other group depends on the effectiveness of the attackers and the defender. It increases with higher attack levels from other players in their group and decreases with the defense level of the attacked player. The outcome of this strategic conflict ranges from full-scale war to complete peace. A numerical measure of efficacy is introduced. In the case of linear effort costs, when attacking a specific player, only the most efficacious attacker expends effort on the attack, while less-efficacious allies free-ride on him. Using convex costs of effort mitigates the free-rider problem. The paper draws parallels with the ongoing Russo-Ukrainian War and the pharmaceutical industry's battles between generic and brand-name drugs.

Strategic Conflict Between Two Groups of Players: The Quadratic-Cost Extension

This project extends the model presented in my job market paper titled "Strategic Conflict Between Two Groups of Players: The Non-Cooperative Approach" to allow for strictly convex cost functions. Convex costs apply to more complex systems where action efficacy is diminished—often due to lengthy command chains and escalating costs with increased effort, as seen in military operations. Unlike the linear-cost model, the free-rider phenomenon is considerably mitigated with strictly convex costs, allowing multiple countries to band together for attacks. Specific examples using quadratic costs are currently being worked out, but the aim is to develop a more general, yet tractable, model.

Strategic Conflict Between Two Groups of Players: The Cooperative Approach

This project investigates a two-stage conflict game between two groups of players. In the first stage, each player determines the monetary effort to allocate towards defending themselves and *their allies*. In the second stage, each player decide how much effort to invest in attacking members of the opposing group. The cooperative version of the game allows players to form coalitions. The study aims to equitably distribute payoffs within each coalition by employing the Shapley value to address potential subsidization issues. By endogenously determining exchange rates, representing relative bargaining power or interpersonal utility weights, this project seeks to establish optimal weights based on each player's contribution to the total monetary effort expended by the coalition.

ANEESH ARORA

Stony Brook, New York

+1-9293187212 aneesharora97@gmail.com aneesharora Website

EDUCATION

Stony Brook University <i>PhD Econometrics and Quantitative Economics(STEM)</i>	August 2019 – Current <i>Stony Brook, New York</i>
Institute for Advanced Computational Science, Stony Brook University <i>Advanced Graduate Certificate in Data and Computational Science</i>	August 2022 – Current <i>Stony Brook, New York</i>
Stony Brook University <i>MA in Economics</i>	August 2018 – May 2020 <i>Stony Brook, New York</i>
Delhi university <i>B.A(Hons) Business Economics</i>	July 2015 – May 2018 <i>New Delhi, India</i>

COURSEWORK / SKILLS

-
- | | | | |
|--|-------------------------------------|--------------------------------------|--|
| • Algorithms and Data Structures | • Empirical Industrial Organisation | • Computational methods in Economics | • Investment and Stock Market |
| • Introduction to Data and Computational Science | • Applied micro-economics | • Applied Econometrics | • Time series Regression |
| | • Game theory | • Statistics & Probability | • Research methods in Business Economics |

RESEARCH FIELD

Empirical Industrial Organisation, Applied Game Theory, Economics of innovation, Applied Microeconomics

PROJECTS

Dynamic Technology Adoption Under Exogenous Technology Shifts JMP: Work in Progress

- In the dynamic environment of technological advancements, firms face the strategic challenge of deciding when to upgrade to the latest technology. In addition to the choice of adoption, this research delves into the critical aspect of timing, wherein the timing of adopting new technology influences firms' payoffs. Employing an empirical structural dynamic model using quarterly data from 2011-2021, within a sequential move game framework, this study investigates firms' behavior in response to the exogenous flow of Spectrum technology, spanning transitions from 3G to 4G and 5G.

'Optimal Pricing in Vertical Mergers' December 2019

- I study the optimal pricing mechanism of a downstream firm in case of a potential foreclosure by upstream firm and how such pricing mechanism can in turn incentivise a merger. I develop a theoretical model of vertical mergers capturing the phenomenon of vertical foreclosure.

TECHNICAL SKILLS

Python(Pandas, Numpy), SQL, R (Econometrics Modelling, Data Modelling, Structural Estimation, Data analysis, Data cleaning, Fixed Effect/ Random Effect Estimation, Multinomial Logit models, Fixed point Algorithms)

Matlab, SPSS, Stata

Teaching Experience

Industrial organisation (ECO 326)	Full Instructor, Summer 2023
Mathematical Statistics (ECO 320)	Full Instructor, Aug 2022-Dec 2022
Intermediate Microeconomic theory (ECO 303)	Teaching Assistant, Summer 2022
Mathematical Statistics (ECO 320)	Teaching Assistant, Jan 2022-May 2022
Demographic Economies of Developing countries (ECO 334)	Teaching Assistant, Jan 2021-May 2021
Mathematical statistics (Eco 320)	Teaching Assistant, Jan 2020- Dec 2020
Introduction to Economics(ECO 108)	Teaching Assistant, Aug 2019-Dec 2019

Hualong (Hetty) Diao

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Stony Brook University
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N-604 Social and Behavioral Sciences Building, 6th Floor
Stony Brook, NY 11794

Research Interests

Applied Microeconomics, Health Economics, Labor Economics, Cybersecurity Economics

Education

Stony Brook University	Ph.D. in Economics	Expected graduation in May 2025
	Advisors: Steven Stern, Mark Montgomery, Sandro Brusco	
Boston University	M.A. in Economics	May 2019
University of International Relations	B.A. in Economics	May 2017

Working Papers

Self-Selection in Randomized Controlled Trials and Screening Decisions: Evidence from the Screening Trial for Lung Cancer (*Job Market Paper*)
Spousal Effects: Will You Quit Smoking Because of Me? with *Junyu Zhang*
Impacts of School Violence on Mental Health and Academic Outcomes for Immigrant and Native-Born Children with *Junyu Zhang*

Working in Progress

Prevalence of Mental Illness and Supply of Medicaid-Funded Services in New York State with *Xin Lu* and *Steven Stern*

Other Writings

Cybersecurity Economics in Latin America and the Caribbean. The World Bank Blog Series. (*Collaborated work, forthcoming*)
Cybersecurity in Healthcare Sector. The World Bank Blog Series. (*Collaborated work, forthcoming*)
Collaborated in World Bank book "[Cybersecurity Economics for Emerging Markets](#)". (*Published*)

Work Experience

2023/08 --- 2024/06	The World Bank, <i>Consultant at Chief Economist Office for the Infrastructure Vice-Presidency</i>
2018/03 --- 2018/08	Boston University, <i>Research Assistant in Economics Department</i>
2017/01 --- 2017/07	The Nielsen Company, <i>Consultant Intern in Automotive Research</i>
2016/09 --- 2016/12	China Development Research Center of the State Council, <i>Intern</i>

Teaching Experience

As Teaching Assistant:

Labor Theory (2024 Spring), Introduction to Economics (2019 Fall, 2020 Spring), Microeconomic Theory I (Graduate level, 2020 Fall), Microeconomic Theory II (Graduate level, 2021 Spring), Intermediate Microeconomic Theory (2021 Fall, 2022 Spring, 2024 Fall)

As Instructor:

Intermediate Microeconomic Theory (2023 Summer)

Conference Presentations

- 2024 Western Economic Association International (WEAI) 99th Annual Conference, the 13th Annual Conference of the American Society of Health Economist (ASHEcon 2024), and the Pennsylvania Economic Association 38th Annual Conference (PEA 2024)
- 2023 Committee on the Status of Women in the Economics Profession (CSWEP) and American Society of Health Economist (ASHEcon) Mentoring Workshop

Scholarships and Awards

Graduate Fellowship Award (Stony Brook University, 2019-present).
Travel Funding for Conference Presentations (Economics Department at Stony Brook University, 2024).
Member of the Stony Brook Economics Department Committee on Diversity and Inclusion (2020-2021).
Graduate Student Employees Union (GSEU) Professional Development Awards.

Computer Skills

Stata, Python, R, MATLAB, Fortran, LaTeX, Microsoft Office

Languages

English (Fluent), Mandarin (Native), Cantonese (Native), French (Beginner)

Certificates

Digital Health: Planning National Systems (UN/World Bank certified course completion)
Online Teaching Certificate (Center for Excellence in Learning and Teaching at Stony Brook University)

References

Professor Steven Stern
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Professor Mark Montgomery
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Professor Sandro Brusco
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Estefania Vergara-Cobos (Economist)
Chief Economist Office for the Infrastructure VP
The World Bank
Washington, D.C., 20433, U.S.
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Self-Selection and the Decision to Participate in Clinical Trials: Evidence from Lung Cancer Screening Trials (Job Market Paper)

Lung cancer is the leading cause of cancer-related deaths worldwide. To combat this, the U.S. Preventive Services Task Force recommends annual screening for high-risk individuals, based on findings from the National Lung Screening Trial (NLST). However, self-selection may reduce the effectiveness of screening in lowering mortality rates. This paper develops a dynamic discrete-choice model that incorporates both NLST participation and lung cancer screening decisions to analyze the factors influencing screening behavior and how self-selection affects health outcomes and costs. Using data from NLST and the National Health Interview Survey (NHIS 2015), the model examines beliefs about lung cancer risk, survival rates, and the costs and benefits of screening, including uncertainties caused by false positives and false negatives. The findings show that individuals with lower lung cancer risk are more likely to screen, and while trial participants who undergo screening have lower mortality rates, those in the general population who screen have higher mortality rates. Counterfactual analysis reveals that lung cancer survival benefits are limited, making 100% screening uptake unlikely. However, targeting underrepresented groups can reduce mortality at minimal cost, and annual lung cancer screening remains the most effective strategy for saving lives.

Spousal Effects: Will You Smoke/Quit Smoking Because of Me? (with Junyu Zhang)

Analyzing Panel Study of Income Dynamics (PSID) data spanning from 1999 to 2019, we use a simultaneous equation model with censored dependent variables, to estimate the spousal effects on smoking behavior as well as the effects of spousal health conditions. By accounting for previous smoking behaviors, state-level cigarette taxes, and unobserved heterogeneity, the model allows us to address simultaneity, homophily, and confounding issues without concerning multiple equilibria. We also consider mental illness records, pregnancy, and health-related occupations, on which smoking awareness and attitude depend heavily. We account for the hidden states of lung disease and heart disease variables, which include: the husband and wife's respective family history of smoking and their family economic status, state-level COPD prevalence, alcohol use, and past diabetes. Our result highlights a strong and positive spousal effect on smoking behaviors. Specifically, husbands tend to smoke less if wives are associated with a higher likelihood of lung disease, while the corresponding effect is the opposite in wives' equation. Mental illness history increases the propensity and intensity to smoke for both husband and wife, with wives being statistically significant. A wife is less likely to smoke during her pregnancy, an effect that is not significant for the husband.

How Does School Violence Affect Immigrant and Native-Born Children? Exploring Impacts on Mental Health and Academic Outcomes (with Junyu Zhang)

This paper investigates how school violence affects academic outcomes through the impacts on mental health for native-born American and immigrant children. We highlight that preventing school violence can improve mental health and academic performance, thus enhancing economic prospects and promoting generational social mobility. We use a simultaneous equations model to exam the structural relationships of bullying involvement, mental health and academic outcomes. Analyzing the 2022 National Survey of Children's Health (NSCH2022), our findings reveal that immigrant children are generally less involved as bullies or victims than their native-born children. Yet, children in white immigrant or low-income families are more susceptible to school violence. Controlling factors like parental mental health, attitudes towards children, and life experiences, we find that immigrant children are mentally healthier compared to native-born children, except for white immigrants who experience more significant mental health challenges. Being bullied significantly increases the likelihood of experiencing mental health issues, while being a bully has a converse impact. This effect has no significant difference between immigrant and native-born children. While immigrant children perform better than native-born children academically, those from white immigrant families show worse academic performance. Mental health improves school performance, but this link is weaker in immigrant children.

Lei Li

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Education

Stony Brook University	2019 – 2025 (Expected)
Ph.D. in Economics (Focus: International Finance, Applied Macroeconomics)	
Renmin University of China	2013 – 2015
M.A. in Finance	
Zhongnan University of Economics and Law	2009 – 2013
B.A. in Finance	

Work Experience

Portfolio Analyst (Buy Side), China Great Wall Securities Co Ltd, China Dec 2014 – Apr 2018

- Analyzed and interpreted **large datasets** from multiple sources to select stocks and used **Monte Carlo Method** to predict future stock prices
- Analyzed and foretasted **financial and operating performance** of public companies by analyzing income statements, balance sheets and cashflow statement to give advice to portfolio construction
- Prepared and **presented** regular reports and presentations on portfolio performance, market updates, and investment recommendations to internal management team
- Coordinate with senior team members on the implementation of the **strategic asset allocation** plan, monitored **investment pipelines** and assisted on **risk management**

Research Experience

"Sovereign Debt crises and Structural Transformation" (Job Market Paper), 2021 - 2024

- Executed empirical analysis of sovereign risk and economic fundamentals in emerging markets using **panel logistic regression** and **machine learning algorithms** in Python and Stata
- Developed **bond pricing models** that incorporate long-term debt to assess default risk, computing the model using **taste shocks** and **discrete choice methods**
- Constructed a **dynamic recursive model** involving the government, banks, and firms, illustrating public and private equilibrium through banks' balance sheets and interest rates
- Solved, simulated, and calibrated dynamic models using Python and FORTRAN and **visualized** the results in MATLAB
- Utilized **parallelization** with OpenMP and MPI to enhance coding efficiency, executing codes on Linux and HPC clusters

"The Consequences of Financial Center Conditions for Emerging Market Sovereigns" with Gabriel Mihalache and Samuele Centorrino, 2020 - 2024

Presented at the SED 2022, Federal Board 2024, Federal Reserve Board-Cleveland 2024, Federal Reserve Board-Richmond 2024, Midwest Macro 2024 by coauthor.

- Applied **time series analysis** techniques, including SVAR, ARIMA, and Local Projection, to create empirical analyses in Stata and Python
- Conducted experiments and utilized models to evaluate the **impulse responses** of emerging market bonds to the **persistence of US monetary shocks**
- Constructed bond pricing models and estimated **real US interest rates** across various terms using multiple models
- Developed and mathematically formulated **economic propositions** to provide theoretical foundations

Other Experience

Course Instructor/TA, Stony Brook University, NY Sep 2019 – Present

- Conveyed economic data, models and concepts to classes of 70 undergraduate students
- Coordinated with 14 Teaching Assistants and the course instructor to address and resolve inquiries and concerns from over 500 students

Research Assistant, Stony Brook University, NY May 2021 – Dec 2022

- Solved and simulated dynamic models using different methods in Python, MATLAB, and FORTRAN

Skills

Programming Languages: Python, Stata, Eviews, Matlab, FORTRAN, R, Dynare, LaTeX

Scientific Computing: Dynamic Programming, Parallelization, OpenMP, MPI, Nonlinear Optimization

Data Science: SQL, Data Visualization, Econometrics, Time Series Analysis, Machine Learning, Casual Inference, Logistic Regression, Discrete Choice Modeling

Certificate, Qualification and Awards

Databases and SQL for Data Science, IBM, 2024

Machine Learning Specialization, Coursera, 2024

Graduate Student Fellowship, 2019 - Present

Futures Professional Qualification Certificate, China Futures Association, 2015

Securities Practitioner Qualification Certificate, Securities Association of China, 2014

The Second-Class Scholarship, Renmin University of China, 2014

The First-Class Scholarship, Zhongnan University of Economics and Law, 2013

Excellent Student Leader, Zhongnan University of Economics and Law, 2012

National Scholarship for Undergraduate Excellence, MOE of China, 2010, 2011, 2012

References

- **Gabriel Mihalache** (The Ohio State University), Assistant Professor, mihalache@gmail.com
- **Juan Carlos Conesa** (Stony Brook University), Professor, juan.conesa@stonybrook.edu
- **Marina Azzimonti** (Federal Reserve Bank of Richmond), Senior Economist and Research Advisor, marina.azzimonti@gmail.com

Zhu Liang

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SUMMARY

Economics Ph.D. candidate specializing in empirical industrial organization and healthcare market analysis. Expert in using R and Python to manage large datasets and develop advanced econometric models. Committed to leveraging analytical skills to enhance strategic decision-making and operational efficiencies across consulting, technology, and other key industries.

EDUCATION

Ph.D. in Economics, STEM, Stony Brook University 2019 - 2025 (Expected)

Fields: Empirical IO, Health Economics, Product Design

Advanced Graduate Certificate in Data and Computational Science 2022 - 2023

Institute for Advanced Computational Science, Stony Brook University

- Gained proficiency in computer science foundations, including data structures and algorithms. Performed parallel computing projects on HPC clusters using C with MPI.
- Employed Python for data science tasks, integrating machine learning libraries like Scikit-learn. Developed a restaurant recommender webpage using NLP tools on Yelp feedback data.
- Honed communication skills to effectively explain technical projects to non-expert audiences.

M.S. in Economics, University of Wisconsin-Madison 2017 - 2019

EXPERIENCE

Job Market Paper

“Risk Adjustment, Self-Selection, and Plan Design in Medicare Advantage” - Accepted for ASSA 2025

- Employed MATLAB to implement a BLP style model that dissects the decision-making processes among consumers, firms, and government entities within the health insurance market.
- Analyzed consumer behavior under self-selection using a logit model of discrete choices, incorporating simulations of private information to identify heterogeneous factors that influence consumer preferences.
- Analyzed the supply side using a Nash-Bertrand competition framework to recover markups and assess optimal product designs, providing insights into trends in MA plan design and instances of overpayment.
- Quantified the welfare impacts of current risk adjustment policies and consumer self-selection behaviors.

Research Assistant, Stony Brook University 2021 - 2023

- Conducted data cleaning and preprocessing on daily transaction data from a major online automotive marketplace using R data.table.
- Managed complex survey data from the Medicare Current Beneficiary Survey, integrating data across various subsections using Tidyverse to construct a detailed individual information database.

Teaching Assistant, Stony Brook University 2019 - 2024

- Conducted recitation classes for Empirical IO and Econometrics courses, focusing on problem-solving sessions and guiding students in the use of statistical software such as R and Stata.
- As Head TA, coordinated activities across multiple TA-led sessions, assigned tasks, and facilitated communication between instructors and TAs.

CERTIFICATIONS, SKILLS

GitHub Copilot, GitHub Foundations, GitHub 2024

Google Data Analytics Professional Certificate, Coursera 2022

Programming: R, MATLAB, Python, SQL, C, MPI, Copilot, Git, \LaTeX

Languages: English (Fluent), Mandarin (Native)

TAKAHIRO MORIYA

takahiro.moriya@stonybrook.edu

EDUCATION

- **Stony Brook University, Ph.D in Economics** *2018-*

Advisors: Steven Stern, Ting Liu

- **Osaka University, MA in Economics** *2014 -2016*
- **Osaka University, BA in Economics** *2009 -2014*

WORKING PAPERS

- Sustainability of Economy: Existence and Optimality under Overlapping-Generations General Equilibrium Framework with Satiation and Fiat Money (with Ken Urai and Hiromi Murakami), 2024.
- Search in Markets for Credence Goods with Multi-attributes (with Ting Liu), 2024.
- Communication Technology Advance and Consequences: Using Two-sided Search Model (**Job Market Paper**), 2024.

WORK IN PROGRESS

- Estimating a Model of Coalition Formation: The Case of Ready-Mixed Concrete Unions (with Masato Nishiwaki), 2024.
- Firm Learning and Asymmetric Information (with Yang Xuan), 2024.
- Covenant Marriages and Other Marriages with Divorce Costs (with Steven Stern), 2024.
- Shapley Value with Econometric applications (with Pradeep Dubey), 2024.
- Dynamic Effect of Health Shock using Kalman Filter Approach (With Robert Millard), 2024.

CONFERENCES AND INVITED TALKS (INCLUDING SCHEDULED)

2025: North American Meeting of Econometric Society (Winter)

2024: European Meeting of Econometric Society (Winter), Applied econometrics workshop at Tokyo U, North American Meeting of Econometric Society (Summer), EARIE*, IIOC*, International game theory festival, SWET, Waseda University, Kobe University, Kyoto University, Osaka University, Sophia University, SEA

2023: SEA*, Lingnan University*, IAAE*, Webinar in credence goods and expert markets*, International game theory festival*

2022: Asia Meeting of Econometric Society*

(* coauthor presented)

TEACHING

- Undergrad Instructor: Econometrics (Spring 2025, Fall 2024), Introductory Economics (Summer, 2024)
- Undergrad Teaching Assistant: Applied Econometrics (Fall 2020), Introductory Economics (Spring 2023, Fall 2023, Summer 2023, Summer 2022)

AWARDS AND SCHOLARSHIPS

- Distinguished Travel Award

OTHER EMPLOYMENT

- Fashion Model *2012-2015*

CITIZENSHIP

- Japan

LANGUAGE

- Japanese (Native)
- English (Fluent)

REFERENCES

- **Steven Stern:** Stony Brook U, Department of Economics steven.stern@stonybrook.edu
- **Ting Liu:** Stony Brook U, Department of Economics ting.liu@stonybrook.edu
- **Pradeep Dubey:** Stony Brook U, Department of Economics pradeep.dubey@stonybrook.edu
- **Sandro Brusco:** Stony Brook U, Department of Economics sandro.brusco@stonybrook.edu

Mansi Sharma, Ph.D.

Contact Information

Department:

Economics Department
Stony Brook University
NY, USA

Contact:

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LinkedIn: [mansi-sharma-econ](https://www.linkedin.com/in/mansi-sharma-econ)
Website: www.mansi-sharma.com

Education

Stony Brook University , USA, Ph.D. in Economics (STEM)	<i>Dec 2024</i>
Indira Gandhi Institute of Development Research , India, Master of Philosophy in Development Studies	<i>Jul 2019</i>
Madras School of Economics , India, Master's in Economics	<i>May 2017</i>
University of Delhi , India, Bachelor's in Mathematics (Honors)	<i>May 2015</i>

Fields of Interest

Development Economics, Gender Economics, Labor Economics, Demography

References

Prof. Steven Stern (Chair)

Department of Economics
Stony Brook University
steven.stern@stonybrook.edu

Prof. Mark Montgomery

Department of Economics
Stony Brook University
mark.montgomery@stonybrook.edu

Assoc. Prof. Hugo Benitez-Silva

Department of Economics
Stony Brook University
hugo.benitez-silva@stonybrook.edu

Working Papers

- Intergenerational Transmission of Attitudes: Views of Spousal Abuse Among Adolescent Children in India (*JMP*)
- Attitudes of Indian Women toward Spousal Abuse
- Generalized Weibull Distributions (*with Prof. Steven Stern, under review at Journal of Applied Econometrics*)
- Simultaneous Hazard Rate Estimation of First Incident of Spousal Abuse and First Birth (*with Steven Stern, under review at International Economic Review*)

Work in Progress

- Matching on Violence (*with Zhuotong Xie*)
- Extreme-Event Threats to Rural Assets: Data from India's PGMSY Road-Assessment Program (*with Prof. Mark Montgomery*)
- Empowerment Reduces Fertility: The Impact of Women's Empowerment on Childbearing in India
- Unintended Consequences of Property Rights in India

Work Experience

Instructor, Stony Brook University, USA

Economic Development (Spring 2024), Mathematical Statistics (Spring 2023), Labor Theory (Summer 2022)

- Designed and developed syllabus according to the university guidelines
- Monitored students' progress throughout the course to ensure their growth
- Held weekly office hours to mentor and guide students regarding coursework and potential career paths
- Taught statistical models to 200+ students, improving their analytical skills with real-world datasets while strengthening my communication and leadership abilities

Teaching Assistant, Stony Brook University, USA

Health Economics (Fall 2024, 2022), Economics of Environment and Natural Resources (Fall 2024), Mathematical Statistics (Fall 2023), Introduction to Economics (Spring 2022, Spring 2021, Fall 2020, Spring 2020, Fall 2019), Economic Development (Fall 2021)

- Conducted weekly recitations and graded assignments
- Led a team of 5+ teaching assistants, overseeing the handling of 500+ students' queries by developing efficient support processes

Statistical Intern, Ministry of Statistics and Program Implementation (MoSPI), India

Summer 2016

- Conducted financial viability analysis of Indian crop cultivation to inform policy recommendations

Honors, Scholarships, and Fellowships

- **Recognized by the *Center for Excellence in Learning and Teaching*** for significantly impacting students' learning
Stony Brook University, USA
- **Full Scholarship for Graduate Studies**
Stony Brook University, USA
- **Master of Philosophy Fellowship**
Indira Gandhi Institute of Development Research, India
- **Qualified National Eligibility Test (NET), UGC India**
Certification for eligibility as Assistant Professor and Research Fellow in Indian universities

Professional Membership

Royal Economic Society

Skills

Programming: Python, R, SQL, Stata, MATLAB, Database Systems

Languages: English, Hindi (native), Punjabi (native), Spanish (beginner-level)

Certifications

- Python Data Analytics by Meta
- Financial Markets by Yale University
- Machine Learning with Python: Foundations by LinkedIn
- Intermediate SQL for Data Scientists by LinkedIn
- Practical A/B Testing by LinkedIn

Volunteering

- Participated in organizing International Conference on Game Theory, Stony Brook University *Jul 2022*
- Participated in organizing and managing a marathon aimed at raising awareness about childhood cancer *Oct 2016*
- Rotaract Club, Active Member *Dec 2012 – Dec 2015*
 - Organized Blood Donation Camps, Slum Visits, Tree Plantation Drives, and Polio Vaccination Camps

Intergenerational Transmission of Attitudes: Views of Spousal Abuse Among Adolescent Children in India

In this paper, I examine how parental attitudes toward spousal abuse in India are transmitted to their children. I simultaneously estimate the factors affecting the attitudes of mothers, fathers, and children while examining the intergenerational transmission of these attitudes. The approach is based on a discrete choice model with correlated unobservable factors, estimated using the Maximum Simulated Likelihood method. Using nationally representative survey data, I find that mothers have a stronger influence than fathers in shaping their daughters' attitudes toward spousal abuse, while fathers have a stronger influence on shaping their sons' attitudes. To provide evidence on whether this correlation is causal, I use parents' education, family background, and contextual variables from data collected in 2005 as instruments. Finally, based on the transition probabilities and the current distribution of acceptance toward spousal abuse, I calculate generational transfers to predict how future generations may behave. The findings suggest that future generations are less likely to justify spousal abuse, indicating a potential slow shift in societal attitudes over time.

Attitudes of Indian Women toward Spousal Abuse

In this paper, I examine the factors that influence Indian women's attitudes toward spousal abuse using a multivariate probit model. I find that a woman who is physically hurt by her parents is more likely to justify spousal abuse, suggesting a normalization of violence rooted in natal family experiences. The results also indicate significant regional variations; women from South India tend to justify spousal abuse more than their counterparts in North and Central India, potentially due to a greater likelihood of experiencing or witnessing abuse in their natal family. These findings underscore the interaction between familial, educational, and regional factors in shaping attitudes of women toward spousal abuse.

– Accepted for presentation at *96th International Atlantic Economic Conference*, *Midwest Economics Association*, and *Lisbon Economics and Statistics of Education*

Generalized Weibull Distributions (with Prof. Steven Stern, under review at *Journal of Applied Econometrics*)

We develop a new polynomial series generalization of the Weibull estimator using polynomials in $\log t$ in a Cox proportional hazards baseline hazard. We also show that we can allow the baseline hazard to depend on an observed explanatory variable. We provide two examples of how it can work: US life tables, first marriage and first birth in India. In the case of India, we observed the relationship between observed heterogeneity and duration dependence bias.

Simultaneous Hazard Rate Estimation of First Incident of Spousal Abuse and First Birth (with Prof. Steven Stern, under review at *International Economic Review*)

In this paper, we examine the relationship between the first incident of spousal abuse and the first birth using data from the National Family Health Survey. We jointly estimate Cox proportional hazard rates for both events while accounting for unobserved individual characteristics that may influence the likelihood of both events. Our findings reveal a significant but very small effect of abuse on the timing of birth. Conversely, having a child delays the onset of abuse, suggesting the husband's satisfaction within the marriage. Our findings confirm the absence of unobserved heterogeneity (selection effect) while supporting the presence of state dependence. We also find that, at any point during marriage, the risk of experiencing birth is higher than the risk of experiencing abuse; however, both processes exhibit negative duration dependence.

Matching on Violence (with Zhuotong Xie)

We examine whether a woman from a violent family is more likely to match with a man from a violent family in India. In the context of this research, a 'violent family' is defined as one where a woman's or a man's father has perpetrated violence against the mother. In India, families arrange marriages, and a woman's family may choose a spouse from a family with traits similar to her natal family. If people are assortative mating on violence, there will be intergenerational transmission of violence. We use a two-sided multi-dimensional matching model of the Indian marriage market to estimate the marriage preferences on violence structurally. Our analysis also considers other important factors of marital sorting, such as education, height, and age. This is important to study as we find that if two individuals from violent families are matched, a woman is more likely to experience abuse in her marriage compared to if none of them is from a violent family or one of them is from a violent family.

Extreme-Event Threats to Rural Assets: Data from India's PGMSY Road Assessment Program (with Prof. Mark Montgomery)

In this paper, we identify types of rural economic assets, including warehouses, banks, hospitals, health centers, petrol pumps, and farmhouses, that are potentially vulnerable to floods, landslides, heat waves, and droughts. We use a national 2018–20 road-surveying exercise, which collected information and GIS coordinates on approximately 800,000 rural sites and assets. Note that the surveyors who collected information on these rural facilities did not follow a standardized method for defining facilities. Some terms were recorded in regional languages or Hindi instead of English, and there were frequent spelling errors. For example, "bank" appeared as "benk," "banck," or "bannk." To address this, we categorized the terms into various groups using regular-expression (regex) methods.

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Education

Ph.D. Economics, Stony Brook University	2025 (expected)
M.A. Economics, Sungkyunkwan University	2019
B.A. Economics, Sungkyunkwan University	2017

Research Interests

Macroeconomics, Labor Economics

Research

Working Papers

Heterogeneity in Income Risk: Measurement and Implications for Consumption Responses
(Job market paper)

Work in Progress

Subsistence Self-employment Among the Old in Frictional Labor Markets *with Kadidia Kamate*

Presentations (* : scheduled)

2024: Western Economic Association International Annual Conference, Atlanta Fed, Midwest Macro Meeting (Fall), Economics Graduate Student Conference at Washington University in St. Louis, Southern Economic Association Annual Meeting*

2023: Atlanta Fed

Research Experiences

Research assistant - Prof. Eva Carceles-Poveda 2021 - 2023

Write codes in Matlab, Julia, Python, and Fortran for graduate computational economics course.

Short-term visiting - Atlanta Fed 2023, 2024

Teaching Experiences

Instructor at Stony Brook University

Public Finance (2022, 2023)

Teaching Assistant at Stony Brook University

Introduction to Economics (2019, 2020, 2024); Intermediate Macroeconomics Theory (2020, 2021); Econometrics (2021, 2022, 2023); Economic Development (2022)

Teaching Assistant at Sungkyunkwan University

International Finance (2017); Foreign Exchange Market (2018); Intermediate Microeconomics (2018); Mathematics for Economics (2019)

Fellowships and Awards

Graduate Fellowship - Stony Brook University 2019 - present

NYS/GSEU Professional Development Program - Stony Brook University 2022, 2023, 2024

Miscellaneous

Languages: English (fluent), Korean (native)

Skills: Julia, Matlab, Stata, R, Python, Fortran

References

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Heterogeneity in Income Risk: Measurement and Implications for Consumption Responses

(Job market paper)

Abstract: I document evidence of heterogeneous income risk, that the distribution of household income volatility cannot be attributed to identical income risk or observable characteristics. I estimate a novel heterogeneous income risk process with household-specific variance in income shocks. Significant heterogeneity is observed in the variance of transitory shocks, while persistent shocks exhibit relatively similar levels among households. The aggregate consumption response to transitory income changes is approximately three times greater in the presence of heterogeneous risk compared to the absence of it. This arises from the fact that most households experience stable income with smaller shock variances than the average, resulting in weaker precautionary saving motives. Furthermore, the consumption response to transitory shock declines as the variance of income risk increases.