Eugenio **Gonzalez Flores**

2nd Year Economics PhD Student · Macroeconomics

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Workshop on Heterogeneous-Agent Macroeconomics

March 20, 2023

National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA 02138

Application for a place at the Workshop on Heterogeneous-Agent Macroeconomics

Dear NBER Members,

I write to you because I wish to participate in the second Workshop on Heterogeneous-Agent Macroeconomics since it would be a great opportunity to meet many other economists and contribute to my understanding of both computational economics and macroeconomics.

I am a second year economics PhD student that is specializing in the field of macroeconomics. During the first year of the PhD I took the traditional macroeconomic sequence of courses which gave me a solid understanding of Dynamic Programming. Furthermore, by June I will also have taken courses that cover financial frictions, optimal fiscal policy and monetary economics that would give me the necessary background to participate in your Workshop.

Currently I have experience with programming in Python as well as solving incomplete market models numerically using Matlab and Julia. Additionally, during the past year I have improved my computational skills following the Julia QuantEcon course, which taught me how to solve heteregenous agent models as well as how to write computationally efficient codes. Given my interest in computational economics, I am very keen in learning more about heterogeneity in the context of HANK models, which is why I am very enthusiastic about being a part of your summer program.

I would like thank you for your time and effort in organizing this workshop, as well as for considering me as an applicant.

Sincerely,

Eugenio Gonzalez Flores

Attached: Curriculum Vitae

References

Mark Bills, University of Rochester: mark.bils@rochester.edu *+1 (585) 738-8859*

Gaston Chaumont, University of Rochester: gaston.chaumont@rochester.edu *+1 (585) 275-3968*

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Education

Instituto Tecnológico Autónomo de México
Mexico City, Mexico

B.A. in Economics — *Aug. 2012 - Dec. 2016*

- Highest Honors
- Overall GPA 9.24/10

Instituto Tecnológico Autónomo de México
Mexico City, Mexico

M.A. in Economic Theory — *Aug. 2017 - Dec. 2020*

- Highest Honors
- Overall GPA 9.57/10

University of Rochester
Rochester, NY USA

PhD in Economics — *Aug. 2021 - Present*

- Field of Specialization: Macroeconomics
- Current GPA 3.97/4.0

PhD Macreoeconomics Courses

ECON 475 - Macroeconomics
University of Rochester

Fall 2021

- Solow Growth Model, Dynamic Optimization, Optimal Growth Model, Overlapping Generations Model, Job Search Model – Diamond-Mortenson-Pissarides

ECON 476 - Macroeconomics II
University of Rochester

Spring 2022

- Exogenously Incomplete Markets and Self Insurance, Endogenously Incomplete Markets, Random Search, Directed Search, Stochastic Processes, Time, Risk, and Valuation, Time Series Data

ECON 535 - Topics in Macroeconomics II
University of Rochester

Fall 2022

- Financial Frictions and Development, Financial Frictions and Business Cycles, Computational Methods, Financial Crises and Runs, Consumption Inequality.

ECON 534 - Topics in Macroeconomics I
University of Rochester

Spring 2023

- Optimal Taxation: Linear Commodity and Income Taxation, Non-linear Income Taxation, Nonlinear income taxation: Taxing superstars, Discrete Choice: Taxing the poor; Taxing across Space.

ECON 536 - Topics in Macroeconomics III
University of Rochester

Spring 2023

- Public Debt Bubbles, Monetary Models, Computational Methods (Introduction to the Sequence Space Jacobian Method)

Other PhD Courses Related to Macroeconomics

ECON 511 - International Trade I
University of Rochester

Fall 2022

- Business Cycles in Emerging Markets, Large Devaluations and Redistribution, Monetary Policy (Open Economy New Keynsian Models), Macroprudential Policy.

ECON 513 - Topics in International Economics
University of Rochester

Spring 2023

- Sovereign Debt, Sovereign Default, Current Account Reversals, Sudden Stops and Macroprudential Regulation, Topics in International Economics with Search Frictions.

Work Experience

University of Rochester *Rochester*

Research Assistant *Jun. 2022 - Present*

- Helped professors Mark Bills and Gaston Chaumont with their respective research projects.

Banco de México: Research Division *Mexico City*

Economist (Research Assistant) *Jan. 2017 - Aug. 2021*

- Economic activity forecasting, research related to current events and data visualization for the Regional Economic Report.

Instituto Tecnológico Autónomo de México *Mexico City*

Research Assistant *Aug. 2016 - Dec. 2016*

- Assisting in setting up, managing and enrolling students for an Experimental Economics experiment for Piotr Evdokimov.

Instituto Tecnológico Autónomo de México *Mexico City*

Teaching Assistant *Aug. 2016 - Dec. 2016*

- Reviewing class notes and, proposing exercises for problem sets and exams for a graduate level General Equilibrium course for Yuhta Ishii.

Teaching Experience

University of Rochester *Rochester*

Teaching Assistant *Feb. 2023 - Present*

- Holding support sessions for first year students of the economcs PhD .

The Edron Academy - El Colegio Británico *Mexico City*

Economics Teacher *Jan. 2016 - Jul. 2016*

- Teacher for International International General Certificate of Secondary Education and International Baccalaureate Economics courses.

Instituto Tecnológico Autónomo de México *Mexico City*

Teaching Assistant *Jan. 2015 - Dec. 2015*

- Leading problem solving sessions for students in Introductory Microeconomics classes for ITAM's Economics Department.

Honors

2022	**Summer Research Fellowship,** University of Rochester	*Rochester*
2021	**McKenzie Fellowship,** University of Rochester	*Rochester*
2021	**Graduate Fellowship and Tuition Scholarship,** University of Rochester	*Rochester*
2021	**Graduated with Highest Honors MA,** Instituto Tecnológico Autónomo de México	*Mexico City*
2019	**Graduated with Highest Honors BA,** Instituto Tecnológico Autónomo de México	*Mexico City*
2012	**Scholarship for Academic Excellence,** Instituto Tecnológico Autónomo de México	*Mexico City*

Skills

Programming Julia, Matlab, Stata, LaTeX, Python

Languages Spanish (native), English (native), French (basic)

References

Mark Bills, University of Rochester: mark.bils@rochester.edu *+1 (585) 738-8859*

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Statement of Purpose

Eugenio González Flores

I am a second year economics PhD student with an interest in understanding how financial frictions and labor market policies can affect welfare of different agents, change inequality between households and cause misallocation of resources in the economy. Given that my research interests require models of heterogenous agents, both at the household and at the firm level, I believe that participating in the second Graduate Student Workshop on Heterogeneous-Agent Macroeconomics could be an important stepping stone in my career as a researcher in macroeconomics.

Since the past summer, I have been working on understanding how the liquidity of assets affects job searching behavior and consumption inequality using an extension of the heterogeneous agent directed search model presented in Chaumont and Shi (2022). In this context, I want to allow the model to have aggregate productivity shocks and include financial shocks coming from an international financial market. By participating in this workshop I hope to learn how to compute transitional dynamics of heterogeneous agent models, which would allow me to use MIT aggregate shocks in the context of this project.

Meanwhile, I started working on an heterogeneous firm model to understand how differences in credit constraints from firms paired with a frictional labor market can lead to larger consumption volatility in emerging markets. In this context, participating in your workshop could teach me how to combine extreme value taste shocks with transitional dynamics estimation. This is useful because models with long term debt use tastes shocks to help the coupon bond price to converge numerically.

Furthermore, I am also interested on the welfare effects of policies that can cause inflationary effects in the economy. Particularly, I would like to focus on the minimum wage and universal basic income. Here my focus would be how the income effect would drive households to substitute their current consumption baskets for higher quality goods, leading to prices of goods experiencing different levels of demand side pressure. Thus, it is of great interest to me to understand how to solve and work with state of the art HANK models.

I currently have experience with programming in Python as well as solving incomplete market models numerically. I learned the basics of Python while attending an introductory Machine Learning course for *Banco de Mexico* employees. On the other hand, throughout the second year of my PhD I have replicated incomplete market models like Chaumont and Shi (2022), as well as using the extreme value taste shock approach to solve the long term debt model proposed by Chatterjee and Eyigungor (2012). I strongly believe this background will allow me to participate in the workshop as well as use the tools discussed there to further my own work in the future.

Finally, since I just moved to the United States two years ago my network of potential colleagues is small. Therefore, attending the Workshop would be a unique opportunity for me to meet fellow students, share my ideas and get input from individuals with different backgrounds than mine.

In conclusion, participating in the Graduate Student Workshop on Heterogeneous-Agent Macroeconomics would be an invaluable opportunity to further my own work and expand my professional network.

References

Chaumont, G., & Shi, S. (2022). Wealth accumulation, on-the-job search and inequality. Journal of Monetary Economics, 128, 51-71.

Chatterjee, S., & Eyigungor, B. (2012). Maturity, Indebtedness, and Default Risk. The American Economic Review, 102(6), 2674–2699. http://www.jstor.org/stable/41724668