

# Our Seniors

**Melissa** is a senior double majoring in Economics and Statistics & Data Science. She is from the suburbs of Philadelphia, where she resides with her two loving parents and older brother and her wonderful grandparents are just down the street. Melissa's favorite part of her time with the economics department has been performing research with Professor Rohini Pande on the gender gap for micro-enterprise outcomes. She is passionate about using technology to improve financial services and access to it. Outside of economics, Melissa loves listening to new music, dancing with friends, coding a new idea, and playing Settlers of Catan.



**Melissa Lu**  
Advisor: Rohini Pande

## Why are Female-Led Micro-Enterprises More Likely to Close?: Evidence from the Indian Microfinance Crisis

This paper seeks to fill a gap in the current credit literature on why female-owned micro-enterprises are more likely to close. We use the AP microfinance crisis as a natural experiment to evaluate the relative roles of liquidity and other factors in driving the gender gap in microfinance outcomes. We find no evidence in favor of the narrative that female entrepreneurs are less capable business decision makers than male entrepreneurs. We find sectoral choice and intra-household dynamics explain a significant portion of the gender gap in business closures and present policy interventions in response to these findings.

**Lauren** is a senior from Philadelphia majoring in Economics and Mathematics. She is very interested in questions surrounding inequality, health, and education; at Yale, she has been able to engage with these questions both within the Economics Department and as a member of the Independent Party of the Yale Political Union and Community Health Educators. She especially looks forward to continuing her work in gender next year at Stanford, where she will begin her PhD in Economics.



**Lauren Harris**  
Advisor: Joseph Altonji

## Estimating Excess Female Attrition From STEM Occupations

The phenomenon of female attrition from science, technology, engineering, and mathematics (STEM) is often referred to as a "leaky pipeline." In my senior essay, I explore attrition rates at two key junctures in this pipeline: before one's first graduate degree and during one's career. I first consider individuals whose undergraduate degrees are in STEM but whose first graduate degrees are in non-STEM fields, and I show how men's and women's predicted attrition probabilities vary by field and birth cohort. While men in the early birth cohorts are more likely to receive first graduate degrees in non-STEM than women, this trend steadily reverses itself over successive birth cohorts. By the 1976-1981 birth cohort, women are more likely than men to leave STEM and pursue non-STEM graduate degrees regardless of undergraduate field. When considering exits from STEM during one's career, I estimate the size of women's excess exits from different STEM disciplines relative to non-STEM fields and identify key reasons for these exits in each field. I find that disaggregating science into mathematics, life sciences, and physical sciences; and engineering into computer science and other engineering fields reveals patterns in attrition that are otherwise masked. In the life sciences, the gender gap in exits is substantially smaller than the gap in exits from non-STEM. I also find evidence of excess exits in computer science and other engineering fields. In computer science and engineering, although exits are driven primarily by pay and promotion, these are larger factors in computer science than in other engineering fields.

**Anna Hope** was a 7th semester senior this fall in Morse College graduating with a degree in Economics. During the fall semester, she completed a one semester thesis with the help of advisor Paul Goldsmith-Pinkham. At Yale, she was involved with the Yale Layer magazine, the CCE program, and Yale Women's Club Rugby. In addition to her interest in Economics, she is also a photographer.



**Anna Hope Emerson**  
Advisor: Paul Goldsmith-Pinkham

## Who Can Stay at Home? Why Nonwhite Americans Are More Likely to Experience Housing Insecurity During the COVID-19 Pandemic

This paper examines racial inequities in housing stability within the context of the coronavirus pandemic. Using the Census Bureau's Household Pulse Survey, I estimate that on average 21.7 million adults in the United States were behind on housing payments between April and October of 2020, and that nonwhite adults were 2.2x more likely to be behind than whites. In order to better understand the economic mechanisms which facilitate this disparity, I use a linear probability model to jointly test the drivers of payment probability and decompose the way that these factors differ by race. Consistent with previous literature, I find that demographic characteristics, housing tenure, and employment shocks are all significant in explaining payment probability and explain some of the variability by race. However, I find that these factors alone are not enough to account for the entire racial gap. Some of the remaining disparity can be explained by variation in sources of backup financing when an income shock is present.

**Alya Ahmed** is a senior studying Economics and Math in Pauli Murray College. Her love of Economics and Math is showcased in her extracurricular activities (as well as homogenous class selection) -- she is the Economics and Math Department Peer Mentor. She has also previously served as course-based peer tutors for intermediate economics classes and conducted research as a Tobin Research Assistant. In her free time, she enjoys reading the NYT, playing tennis, and cooking. She is originally from the Washington DC area and will be moving to New York City after graduation where she will be working in finance.



**Alya K. Ahmed**  
Advisor: Sigrídur Benediktsdóttir

## Macroprudential Policy Communication During Covid-19

Macroprudential policy has become an increasingly important tool employed by financial authorities. Motivated by the variety and volume of macroprudential actions taken during the first 6 months of the Covid-19 pandemic, in this paper we use LDA textual analysis to characterize and compare policy communications by the US, UK, EU, India, and Mexico. In addition, we measure the effect of macroprudential policy communications on key financial variables (daily index returns, bond yields, foreign exchange), paying particular attention to any influence of US macroprudential policy on other countries. With these two results, we hope to shed more light on these macroprudential policies and their effects to allow for an ex-post evaluation.

Join us via Zoom on  
Friday, May 7th at 1:00 pm ET