Alireza Marahel

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Education

- **Indiana University**, Bloomington, IN   2018-2024(Expected)
  Ph.D. in Economics

- **Sharif University of Technology**, Tehran, Iran   2013-2018
  Bachelor of Science in Mechanical Engineering
  Minor in Economics

Skills

- *Computing:* Fluent in Python, Matlab, R, Stata, Unix shell script; Beginer in SQL, HTML and C.

- *Others:* LaTeX, MS Office (Fluent in Excel), SolidWorks, COMSOL Multiphysics, AutoCAD.

Research

Indiana University

Fields: Econometrics, Asset Pricing, Machine Learning *(secondary and in progress)*

- "Panel Regression with Endogenous Regime Switching", with Yoosoon Chang and Joon Y. Park
  – A new approach to model panel regressions with endogenous regime switching using an autoregressive latent factor (applicable to any multifactor asset pricing model).

- "Revenue Mobilization for a Resilient and Inclusive Recovery in the Middle East and Central Asia", in collaboration with the Fiscal Policy Group, Middle East and Central Asia Department, IMF

  – Assessing the tax capacity, finding its key determinants and estimating the tax revenue gaps/inefficiency in MCD countries using a Stochastic Tax Frontier model for panel data with time-variant inefficiency.

- "How Tariffs Can Reshape the International Trade Flow: Evidence from Colombia"
  – Industry-level gravity estimation (using the fixed effect ordinary least squares and the PPML estimators), estimation of gains of trade for the multi-industry trade model, welfare gains of the break-down of FTAs using the Hat-Algebra approach

- "Transmission of Macroeconomic Shocks Through Trade Agreements Using an Endogenous Regime Switching Approach"

- "How Beliefs Affect the Portfolio Decisions: An Experimental Approach"

- Familiar with Machine Learning Techniques

Sharif University of Technology

- Undergraduate thesis: "Micro-Dissected Tumor Slice on a Chip"

- Modeled a newly designed micro-channel which simulates an actual human body in terms of food and oxygen supply to the cancer tissue for drug responses.
- A diff-in-diff estimation of the effects of different drugs on the cancer tissue

- Feasibility Study of Increasing the Capacity of Khuzestan Steel Company (Zamzam 3 Construction Project)

- Analysing The Effects of International Sanctions on the Availability of Pharmaceutical Drugs and How It May Affect the Cancer Treatment (Data Collection)

- "Analysis of the probable effects of Iran's entry into the WTO Agreement"

- Familiar with Plastic Model Injection

Teaching Experience

Indiana University
Undergraduate Courses

• Statistical Analysis for Business and Economics (Instructor)	8 Semesters

Sharif University of Technology
Undergraduate Courses

• Intro to Macroeconomics (TA)	SP2017
• Intro to Microeconomics (TA)	FA2017
• Statistical Analysis for Business and Economics (TA)	SU2020, SP2023

Internships and Work Experience

• City of Indianapolis - Office of Sustainability	May 2023 - Sep 2023
• International Monetary Fund (IMF)	Jun 2021 - Sep 2021
• Saipa Motor Corporation	Jun 2017 - Sep 2017
• Khuzestan Steel Company	Jun 2016 - Sep 2016
• Top-sonic Co.	Jan 2014 - Feb 2014

Honors and Awards

- McKinney Climate Fellowship, *Environmental Resilience Institute*	2023
- Doctoral Assistantship, Department of Economics, *Indiana University*	2019 - 2023
- College Graduate Fellowship recipient, *Indiana University*	2018 - 2019
- Top-Up Fellowship recipient, *Indiana University*	2018 - 2019
- Member and Fellowship recipient, *Iran's National Elite Foundation*	2013 - 2015
- Ranked Top 0.1% in the National Universities Entrance Exam for Bachelor degree in Engineering and Technological Fields (147th among approximately 250k applicants)	2013