

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; Beginner in SQL, HTML and C.
- *Others*: L^AT_EX, 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

- 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