# Tural Sadigov

## U.S. Permanent Resident

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turalsadigov

tural-sadigov


## About me

Visiting Assistant Professor of Mathematics and Statistics with Ph.D. in Applied Mathematics and 7+ years experience in developing and teaching both mathematics and data-related courses such as various levels of Statistics, Machine Learning, Probability and Time Series Analysis (on Coursera) and mentoring undergraduate Machine Learning projects in Statistical Methods in Machine Learning course. Using R and RStudio extensively in all data-related course. Creator of R package stats2data (`https://github.com/turalsadigov/stats2data`) for Statistical Modeling and Applciations course at Hamilton College. Skills: Mathematics, Statistics, Machine Learning, Python, R, SQLite, Quarto, R Markdwon, LaTeX. More detailed cv: `https://turalsadigov.github.io/cv.html`

## Current and Past Positions

**2020 -** Visiting Assistant Professor — Hamilton College
Teaching data science courses including Statistical Analysis of Data, Statistical Modeling and Its Applications and Statistical Methods in Machine Learning. Supervising students' machine learning projects. Morever, teaching other mathematics courses such as all levels of calculus, and doing research in the combination of Machine Learning and Applied Mathematics.

**2017 -** Coursera Instructor — Coursera
Practical Time Series Analysis

**2019 - 20** Statistics Lecturer — Hamilton College
Statistical Analysis of Data

**2015 - 20** Applied Mathematics Lecturer and Math Service Coordinator — SUNY Polytechnic Institute
Teaching applied mathematics and statistics courses such Applied Probability, Regression, Time Series Analysis, Linear Algebra, Calculus, Differential Equations. Both undergraduate and graduate level courses

## Education

**2008 - 15** Ph.D and MA, Applied Mathematics — Indiana University
Bloomington, IN

**2003 - 08** BS, Mathematics — Boğaziçi University
Istanbul, Turkey

## Data Science Skills

- Supervised/Unsupervised Machine Learning
- Data Wrangling, Cleaning, Preprocessing & Feature Engineering
- Time Series Analysis: ARIMA, SARIMA
- Statistical Inference
- Data Visualization
- Communication, reporting and dashboard: Quarto, R Markdown, Jupyter Notebook, R Shiny. Sample R Shiny web app: Link to the app

## Research Experience

**2020, 21** Summer Research Associate — Air Force Research Lab Griffis Institute
Worked on theoretical neural network solutions of dispersive equations and numerical algorithms to solve partial differential equations

## Awards/Grants

- Summer research grants, Air Force Research Lab/Griffis Institute, 2021-22 ($36000)
- Dean's Pedagogical Development Awards, Hamilton College, 2021-22 ($4500)
- Teaching Grant from Herkimer College and Hamilton College for teaching Financial Mathematics, 2022 ($10000)
- SGU Award for Excellence in Teaching, SUNY Poly, AY 2018-19
- Bronze Medal, 44th International Mathematical Olympiad, Tokyo, Japan, 2003
- Gold Medal (four times), Azerbaijan Mathematical Olympiad, 2000-03

## Publications

1. Safety Prediction Model for Reinforced Highway Slope using a Machine Learning Method, 2020 (Link to the paper)
2. A Determining Form for the Subcritical Surface Quasi-Geostrophic Equation, 2019 (Link to the paper)
3. Determining form and data assimilation algorithm for weakly damped and driven Korteweg–de Vries equation — Fourier modes case, 2017 (Link to the paper)
4. A determining form for the damped driven nonlinear Schrödinger equation—Fourier modes case, 2015 (Link to the paper)