Sajjad Torabian

Current Position: **Ph.D. Candidate** in Cognitive Sciences, University of California, Irvine
Instructor, University of California, Irvine

Contact: torabias@uci.edu

Research Interests: Social Cognition, Motion Perception, Computational Modeling

Education

University of California Irvine, CA, USA — Sep 2019 - Present
Ph.D. Candidate, Department of Cognitive Sciences
M.Sc., Department of Statistics — Sep 2019 - June 2022

Stanford University, CA, USA — May 2017 - May 2018
Research Assistant, Department of Psychology

University of Louisville, KY, USA — Aug 2015 - May 2017
M.Sc., Computer Science and Engineering Department

University of Tehran, Tehran, Iran — Sep 2009 - Jan 2015
B.Sc., Department of Electrical and Computer Engineering

Research Experience

Dept. of Cognitive Sciences, UC Irvine — Sep 2019 - Present
Grad. Researcher, ***Visual Perception and Neuroimaging Lab***
- *Studying perceptual and social cognitive attributions derived from moving shapes*

Advisor: Emily Grossman

Dept. of Psychology, Stanford University — May 2017 - May 2018
Research Assistant, ***Social Learning Lab***
- *Developed reproducible pipelines for fMRI analysis*

Supervisor: Hyowon Gweon

Dept. of Psychological and Brain Sciences, Univ. of Louisville — Sep 2016 - Apr 2017
Grad. Researcher, ***NeuroImaging Laboratory of Cognitive Affective and Motoric Processes***
- *Master's Thesis: "Using an MVPA approach to decode fMRI responses to fear and anxiety"*

Advisors: Brendan Depue & Roman Yampolskiy

Dept. of Computer Science and Engineering, Univ. of Louisville — July 2013 - Sep 2013
Research Intern, ***Cyber Security Laboratory***
- *Developed audio CAPTCHAs (Completely Automated Public Turing test to tell Computers & Humans Apart)*
- *Work recognized on department's homepage*

Supervisor: Roman Yampolskiy

Dept. of Electrical and Computer Engineering, Univ. of Tehran — Jan 2012 - June 2013
Undergrad. Researcher, ***Artificial Intelligence and Robotics Laboratory***

- *RoboCup Team Member: 3D soccer simulation with humanoid robot "NAO"* *Jan 2011 - June 2013*
- *Game Team Leader:* *Fall 2009 - Fall 2011*
    - *Developed 3D games with Microsoft DirectX*
    - *Taught fundamentals of computer graphics and DirectX to undergraduate students, Spring 2011*

Supervisor: Hadi Moradi

Teaching Experience

University of California Irvine

Instructor,

Experimental Research in Psychology — Fall 2024

Probability and Statistics in Psychology III — Summer 2024

Probability and Statistics in Psychology I — Spring 2022, Summers 2022 & 2023 & 2024

Advanced fMRI — Spring 2024

- *New course designed and taught, with a focus on data science and neuroimaging*

Teaching Assistant,

Probability and Inference, Intro to fMRI Research, Cognitive Neuroscience, Psych Research Methods, Psych Fundamentals, Exploratory Data Analysis, Intro to Psych, Industrial-Organizational Psychology, Probability and Statistics in Psychology III

University of Louisville

Teaching Assistant, Intro to Programming Languages — Fall 2015 - Spring 2017

University of Tehran

Teaching Assistant, Discrete Mathematics — Spring 2013

Roozbeh Institute — Fall 2009 - Spring 2012

School Teacher,

Discrete Mathematics, Geometry, C++ Programming, Intro to Information Technology

Honors & Awards

Nominated for the **Most Promising Future Faculty Award**, University of California, Irvine

Graduate Dean's **Recruitment Fellowship**, University of California Irvine (Spring 2019)

CECS **Master of Science Award**, University of Louisville (Apr 2017)

Merit Scholar Award, University of Louisville (Fall 2015 - Spring 2017)

CECS Department Scholarship, University of Louisville (Spring 2016)

International Center Scholarship, University of Louisville (Spring 2016, Fall 2016)

Alumni Association of Faculty of Engineering Scholarship, University of Tehran (Spring 2013)

Publications

Poldrack, R. A., Markiewicz, C. J., Appelhoff, S., Ashar, Y. K., Auer, T., Baillet, S., ... , **Torabian, S.**, Varoquaux, G., Voytek, B., Welzel, J., Wilson, M., Yarkoni, T., Gorgolewski, K. J. (in press). The Past, Present, and Future of the Brain Imaging Data Structure (BIDS). Imaging Neuroscience

Torabian, S., & Grossman, E. D. (2023). When shapes are more than shapes: perceptual, developmental, and neurophysiological basis for attributions of animacy and theory of mind. Frontiers in psychology, 14, 1168739. https://doi.org/10.3389/fpsyg.2023.1168739

Torabian, S., Vélez, N., Sochat, V., Halchenko, Y. O., & Grossman, E. D. (2023). The PyMVPA BIDS-App: a robust multivariate pattern analysis pipeline for fMRI data. Frontiers in neuroscience, 17, 1233416. https://doi.org/10.3389/fnins.2023.1233416

Torabian, S. Using a MultiVariate Pattern Analysis (MVPA) approach to decode fMRI responses to fear and anxiety. 2017

- *Master's Thesis*

S. Torabian, S. HoseinAlipour, A. Mirzargar, and M. Tavakkolian. Improving the Localization of Humanoid Soccer Robots in Specified Fields: A Neural Network Approach. *RSI/ISM International Conference on Robotics and Mechatronics (ICRoM)*, Tehran, Iran, 2013

Abstracts

Torabian, S et al. "Neural Representations that Reveal a Unified Continuum between Physical and Social Events"

Grossman, ED, **Torabian, S** et al. "Social and Perceptual Attributions Derived from Moving Shapes: A Language Model Analysis"

Torabian, S et al. "Linking Intuitive Physics to Social Cognitive Attributions." Journal of Vision 23.9 (2023): n. pag. Web.

Invited Talks

"A neural stream that categorizes and interconnects physical and social events", Isik, Liu, & Shu Lab Meeting, Johns Hopkins University, Aug. 2024

"Neural Representations that Reveal a Unified Continuum between Physical and Social Events", Lu & Kellman Lab Meeting, UCLA, Apr. 2024

"The PyMVPA BIDS-App", Amirkabir Artificial Intelligence Student Summit, Amirkabir University of Technology, Dec. 2023

"Linking Intuitive Physics to Cognitive Attributions", Social Cognitive Neuroscience Lab Meeting, University of Iowa, Sep. 2022

"From Genes to Cognition", Amirkabir Artificial Intelligence Summer Summit, Amirkabir University of Technology, Jul. 2019

"MultiVariate Pattern Analysis", Deep Learning Summer School, University of Tehran, Aug. 2018

"How to study the Mind: Monolithic or Modular?", Stanford University, Nov. 2017

Conference Presentations

Torabian, S et al. Neural Representations that Reveal a Unified Continuum between Physical and Social Events. Poster presented at the Vision Sciences Society, May 2024

Grossman, ED, **Torabian, S** et al. Social and Perceptual Attributions Derived from Moving Shapes: A Language Model Analysis. Poster presented at the Vision Sciences Society, May 2024

S. Torabian, JA Pyles, Y Peng, H Lu, ED Grossman. Linking Intuitive Physics to Social Cognitive Attributions. Poster presented at the Vision Sciences Society, May 2023

S. Torabian, S. HoseinAlipour, A. Mirzargar, and M. Tavakkolian. Improving the Localization of Humanoid Soccer Robots in Specified Fields: A Neural Network Approach. Talk presented at the International Conference on Robotics and Mechatronics, Tehran, Iran, Feb 2013

Workshops Attended

Neurohackademy, University of Washington, Jul 25 - Aug 5 2022

- *Two-week summer school on neuroimaging and data science*
- *Completed a collaborative project on theory of mind attributions using the Natural Scenes Dataset (NSD)*

Professional Service

Ad-hoc Reviews: *Journal of Neuroscience*, *Neurons, Behavior, Data analysis, and Theory*

Seminars & Workshops

How to Apply, University of Tehran, Oct 2018

- *Assisted students with graduate school applications*

How to Apply, July, Aug, Sep, Nov 2018, Jan & Feb 2019

International Internship, Tehran University of Medical Sciences, Nov & Dec 2014

Volunteer Experience

Vice President at Organization Assisting and Serving International Students (OASIS), Fall 2016

Officer at Iranian Student Organization, University of Louisville, Fall 2015 - Spring 2017

Music & Selected Performances

Playing santoor (Iranian instrument) since 2009

Concertino for Santoor & Orchestra, Margaret Comstock Concert Hall, Univ. of Louisville School of Music, Apr. 2017

- *https://www.youtube.com/watch?v=J9WZBtXJioM*

Solo Concert, Malcolm Bird Hall, Univ. of Louisville School of Music, Mar. 2016

- *https://www.youtube.com/watch?v=TV8OYrYQxTE*