

Sara Moti

sara.moti@ipm.ir | [Skype](#) | [IPM Profile](#) |

RESEARCH INTERESTS

Cognitive Neuroscience Computational Neuroscience

EDUCATION

Shahid Beheshti University, Tehran, Iran
(GPA: 3.53/4, **First Ranked Honor**),
2014–2017

M.Sc. in Condensed Matter Physics

Alzahra University, Tehran, Iran
(GPA: 3.73/4, **First Ranked Honor**),
2010–2014

B.Sc. in Physics

RESEARCH EXPERIENCE

Research Assistant, Institute for Research in Fundamental Sciences (Prof. Ghazizadeh), (2020–present)

- Conducted behavioral experiments in human to investigate relationship between valence and saliency and the effect of these motivational outcomes on visual search
- Analyzed eye tracker data using MATLAB
- Led the fNIRS setup process including installation and calibration
- Validated consistency and accuracy of fNIRS measurements by conducting a series of test experiments
- Developed proficiency in conducting fNIRS experiments
- Developed proficiency in conducting EEG experiments

Researcher in Cognitive Neuroscience Visio Motor Laboratory (Prof. Asadollahi), 2019–2020

- Facilitated the eye tracker setup to conduct psychophysics experiments
- Used Psychophysical combined with gaze tracking techniques to investigate role of salience and value in oculomotor target selection behavior
- Completed courses such as Neuroanatomy, Central Nervous System, Cognitive Psychology, Signal Processing and Analysis Methods in Neuroscience

Master Thesis: Static Properties of Magnetic Nano-Skyrmion and Their Stability Under Demagnetizing Field and Surface Roughness, (2016–2017)

- Developed a micromagnetic model to investigate magnetic skyrmions stability as potential data storage
- Performed numerical analysis to drive the shape and stability of the skyrmions as a function of applied field and other parameters
- Proposed a model to calculate demagnetizing field of skyrmions

Undergraduate Researcher, Alzahra University, (2012–2014)

- Wrote assembly code for temperature alarm circuit
- Made a digital clock with microcontroller
- Solve the famous problem of brachistochrone and construct the brachistochrone model

TEACHING AND OTHER EXPERIENCES

- **Teaching Assistant** (Sharif University of Technology, Tehran, Iran): Principle of Design and Analysis of Experiments (2021-2022)
Prepared and graded written assignments and helped students complete assignments
- **Lab's Instructor** (Khayyam University, Mashhad, Iran): Physics (2017-2019)
Prepared course material, including laboratory experiments, lectures, exams, homework, and practice problems
- **Teaching Assistant:** (Alzahra University, Tehran, Iran): Electromagnetic (Sep 2015–Aug2016) Organized tutorials to clarify course material, created exams and quizzes for the course, taught review sessions before midterms and finals, graded assignments and quizzes

SKILLS

- **Research:**
 - Skilled in conducting literature searches
 - Experienced in designing experiments
 - Knowledgeable in statistical analysis techniques
- **Lab:**
 - Proficient in collecting data by EyeLink eye tracker
 - Proficient in collecting EEG data
 - Proficient in collecting fNIRS data
 - Basic fMRI data collection
- **Technical:**
 - Proficient in MATLAB
 - Proficient in Psychtoolbox
 - Proficient in LaTeX
 - Familiar with Python
 - Familiar with Fortran
 - Familiar with R
- **Communication:**
 - Flexible in a new working environment
 - Able to work effectively in research teams
 - Able to effectively communicate and present findings

CONFERENCES AND WORKSHOPS

- **Computational Neuroscience Summer School by Neuromatch Academy**
Three weeks summer school on Computational Neuroscience, 2024
- **Comprehensive Course of fMRI in Cognitive Neuroscience by Dr. Reza Rajimehr**
Eight weeks course on basics of fMRI, data acquisition, statistical analysis and interpretation of fMRI data, IPM, Tehran, Iran, 2024
- **Poster Presentation at Annual Physics Conference of Iran**
S.Moti, M.Mohseni; Strain effect on individual structure and its Crystal; The Annual Physics Conference of Iran, 2016
- **Workshop on Basics of EEG Data Gathering and Analysis**
Two days workshop at National Mapping Lab, Tehran Iran, 2018
- **Neurotract International Spring School**
One week school at Student Scientific Researcher Center, Tehran, Iran, 2019

REFERENCES

- Prof. A.Ghazizadeh, Scholar in Residence,** Columbia University(alieghazizadeh@gmail.com)
- Prof. A.Asadollahi, Staff Scientist,** Washington University(asadollahi.ali@gmail.com)