Erfan Abbasgholinejad

Education

2017-2021   **B.Sc. in Physics**, Sharif University of Technology, Department of Physics, Tehran, Iran, GPA: 18.64/20.

2013-2017   **High School Diploma in Mathematics and Physics Discipline**, Allameh Tabatabaei High School, Tehran, Iran.

2016   **Theoretical and Experimental Physics Preparation Courses for IPhO (International Physics Olympiad)**, Young Scholars Club (YSC), Tehran, Iran.

Interests

Data Analysis   Blockchain and Cryptocurrency

Honors & Awards

2017   Silver Medal of International Physics Olympiad (IPhO)

2016   Gold Medal of National Physics Olympiad

2015   Silver Medal of National Astronomy and Astrophysics Olympiad

Selected Courses

Machine-Learning in Physics   Statistical Mechanics 1, 2

Computer Simulations in Physics   Blockchain Basics (Coursera)

Bitcoin and Cryptocurrency Technologies (Coursera)

Research Experience

June 2021 - Aug. 2021   **Prediction of RPC efficiency using machine learning techniques ([link](#))**
CERN summer studentship 2021
Supervisor: Dr. Andres Leonardo Cabrera Mora

K-NN classification and regression models are used to estimate the efficiency for the Resistive Plate Chambers (RPC) of the Compact Muon Solenoid (CMS), one of the Large Hadron Collider (LHC) experiments located at CERN.

Apr. 2020 - July 2021	**Unravelling the role of cosmic velocity field in dark matter halo mass function using deep learning**([arXiv](#))
	Sharif University of Technology, Tehran, Iran
	Supervisors: Dr. Sadegh Raeisi and Dr. Shant Baghram
	Working on prediction of sub halo mass function of dark matter from the early universe mass distribution using methods such as random forrest and convolutional neural networks

Teaching Experience

Teaching Assistant:

Spring 2021	Thermodynamics And Statistical Mechanics 2 (Prof. Vahid Karimipour)
Fall 2020	Thermodynamics And Statistical Mechanics 1 (Prof. Vahid Karimipour)
2019-2020	**Member of physics committee**
	Taking theoretical and experimental exams to choose Iran physics team for IPhO at Young Scholars Club (YSC)
2017-2019	**Teaching theoretical and experimental Physics** at various high schools in Iran

Languages

Persian	Native
English	Professional working proficiency
German	Elementary proficiency

Extra Curricular Activities

2018-present	**Hiking and Rock climbing**
	Member of the Sharif University mountain climbing group (Responsible for tents, backpacks, and sleeping bags of the group).
	Climbed the first three highest mountains of Iran: (Damavand, Alam-kuh, Sabalan)
2015-2019	**Piano** learner at AUN music institute.