

Shadi Akbari Shahrestani

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EDUCATION

Sharif University of Technology, Tehran, Iran

B.Sc. Major in Physics (2020-2025)

Bachelor degree's GPA: 17.38/20

Fadak High School, Tehran, Iran

High School Diploma, Mathematics & Physics

GPA: 19.70/20

INTERNSHIPS

• Calculating the Bondi-Sachs formalism in Sage manifold (remote)

– *Max Planck Institute for Gravitational Physics (AEI)*

june -oct 2025

Supervisor: [Dr. Sajad Aghapour](#)

SELECTED COURSEWORKS AND GRADES

Graduate Courses:

• Advanced Cosmology I (19/20)

lecturer: Dr. Ali Abolhasani

• Advanced Cosmology II (audited)

lecturer: Dr. Mohammad Hossein Namjoo (at IPM)

• Quantum Field Theory I (audited)

lecturer: Dr. Hassan Firouzjahi (at IPM)

• Special Topics in Gravity (18/20)

lecturer: Dr.Bahram Mashhoon

Introduction to General Relativity (17/20)

lecturer: Dr. Sohrab Rahvar

Astronomy Laboratory I (20/20)

lecturer: Dr. Reza Rezaei

Astrophysics I (17/20)

lecturer: Dr. Reza Rezaei

On Coursera:

• Machine Learning Specialization Certificate

Instructor: Andrew Ng

Undergraduate Courses:

• Cosmology(20/20), Special relativity(18.4/20), Electroacoustic laboratory(20/20)

TECHNICAL SKILLS

Programming Languages: Phyton, Sage-Manifold, Mathematica, C

Libraries and Tools: Astropy, Pandas, NumPy, Matplotlib, Seaborn, Tensorflow, Sklearn, xACT

Documentation: \LaTeX (Advanced)

ACADEMIC EXPERIENCES

• Teaching Assistant

– *Cosmology (The Expanding Universe, The Hot Universe, The Structure Formation)*

Dec2023-Jun 2024

Professor: Dr. Nima Khosravi

– *Introduction to Astronomy*

Sep2023-Dec 2023

Professor: Dr. Sohrab Rahvar

• Computer Lab Supervisor

Oct2023-Mar2024

Physics Department, Sharif University of Technology

• Scientific Writer of two articles in the 33nd edition of Tekaneh Journal

2023-2024

The Scientific Journal of the Physics department of Sharif University of Technology

COURSE PROJECTS

- **Physics project BSc (20/20) :**

ADM formalism and primordial non-Gaussianity by review article: "Non-Gaussian features of primordial fluctuations in single field inflationary models"

Supervisors: Dr. Mohammad Hossein Namjoo - Dr. Aliakbar Abolhasani

- **Special Topics in Gravity :**

Computing the Kretschmann scalar K from Riemann curvature tensor

Supervisor: prof. Bahram Mashhoon

- **Astronomy Laboratory I :**

Analyzing the obtained data such as: analyzing dark images, PSF, finding the magnitude of the background and the comparative magnitude of the stars and obtaining the absorption coefficient and the magnitude of the stars in open cluster M29 [GitHub](#)

Supervisor: Dr. Reza Rezaei

- **Machine Learning Specialization :**

Supervised Machine Learning , Advanced Learning Algorithms, Unsupervised Learning, Recommenders, Reinforcement Learning.

Instructor: Andrew Ng

HONORS

- **Universities Entrance Exam:** Ranked Top 0.5% (among 155,250 candidates) in Iran's National Universities Entrance Exam – 2020

- **Blue belt in taekwondo Certificate**

- **Interview by Sharif's newspaper regarding the Open Day 2023 event I organized**

EXECUTIVE EXPERIENCES

- **The Juror and Executive Committee Member (Certified)**

In The 17th Persian Young Physicist Tournament (PYPT)

Feb 2024

- **Manager of the Open Day 2023 & 2024**

Performing physics experiments for students and the public, Held at Physic Department of SUT

24 Dec 2023

- **Scientific Director**

Physics Department Students' Scientific Association (SPSSA), Tehran, Iran

2021-2022

CONFERENCES AND WORKSHOPS

- **Cosmology from Home 2024**

17–28 Jun 2024

- **Crash Course**

Sep 2025

On introduction to Mathematica xAct Package and Applications in Gravitational Physic

HOBBIES

- Reading books, Writing, learning new languages, Playing Setar, Taekwando and Cooking

LANGUAGES

- **English : C1 , Persian : Native , German : A2 , French : A1**