

# Meysam Hassandoust

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## Education

### Shahid Beheshti University

Tehran, Iran

BTech in Physics

Sep 2019 - Current

- **Courses:** Mathematical Physics , Quantum Mechanics , Electromagnetism , Electrodynamics , Analytical Mechanics , Theory of Relativity , Solid State Physics, Foundation of Matrices and Linear Algebra

### Atomic Energy High School

Tehran, Iran

High School

Apr 2016 - Apr 2019

- Passed with Distinction
- Specialised in Physics and Maths

## Research Experience

### Shahid Beheshti University

Tehran, Iran

Quantum Cosmology

Aug 2023 - Present

- WaveFunction of the Universe in Anisotropic Minisuperspace Model.
- Analytical solution of the Dirac equation near the event horizon of a charged black hole.

### Shahid Beheshti University

Tehran, Iran

Quantum Mechanics

Sep 2022 - Present

- Supersymmetry in Quantum Mechanics by Generalized Uncertainty Principle.
- Supersymmetry in Quantum Mehcanics for Dirac equation in FRW space time.
- Supersymmetry time dependent in Quantum Mehcanics.

### Shahid Beheshti University

Tehran, Iran

Quantum Optics

Jun 2022 - Sep 2022

- Literature Review on Rydberg RF Receiver Operation to Track RF Signal Fading and Frequency Drift .
- Literature Review on Electromagnetically Induced Transparency (EIT) .
- Literature Review on Atom based RF electric field sensing .
- Investigating the phenomenon of anti-resonance and resonance in coupled oscillators and comparing the Fano phenomenon in classical and quantum states .
- Analytical solution of N Coupled Oscillators in Classical Mechancis .

### Shahid Beheshti University

Tehran, Iran

Mathematical Physics

Jun 2022 - Apr 2023

- Pseudo-Supersymmetry time dependent in Quantum Mechanics
- Literature Review on Pseudo-Hermitian Hamiltonian Representation Of Quantum Mechanics .
- Literature Review on Pseudo-Supersymmetry in Quantum Mechanics .

### Shahid Beheshti University

Tehran, Iran

Computational Work

Jun 2020 - Jul 2022

- Numerical Approach (Monte Carlo Method) For Feynman Path Integral . (Basic)
- Numerical Approach For Schrödinger Equation .
- Numerical solution of Laplace Equation in Electromagnetic .
- Numerical solution of Ising Model .
- Numerical solution of the Three-Body Problem .

## Teaching Experiences

### Quantum Mechanics I Teacher's Aide

Tehran, Iran

Shahid Beheshti University

Sep 2022 - Feb 2023

- Course Instructor: Prof. Ali Sadeghi

### Mathematical Physics II Teacher's Aide

Tehran, Iran

Shahid Beheshti University

Mar 2021 - Jun 2022

- Course Instructor: Prof. Ali Hosseini

## Analytical Mechanics II Teacher's Aide

Shahid Beheshti University

- Course Instructor: Prof. Mohammad Aliakbari

Tehran, Iran

Mar 2021 - Jun 2022

## Mathematical Physics I Teacher's Aide

Shahid Beheshti University

- Course Instructor: Prof. Ali Hosseini

Tehran, Iran

Sep 2021 - Feb 2022

## Skills

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**Programming** Python , C/C++, HTML/CSS , Mathematica , Word , Excel.

**Soft Skills** Time Management, Teamwork, Problem-solving.

## Achievements

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2023	<b>Ranked</b> , 8th in the university students' national Physics Olympiad for the second consecutive year	Iran
2023	<b>Ranked</b> , One of the first 15 students in the national master studies entrance exam	Iran
2018	<b>Pass</b> , Passing the First Stage Of Astronomy Olympiad	Iran
2018	<b>Pass</b> , Passing the First Stage Of Physics Olympiad	Iran
2018	<b>Pass</b> , Passing the First Stage Of Mathematics Olympiad	Iran
2018	<b>Level 6</b> , Ranked 6th in the Messie Marathon	Iran
2014	<b>Winner</b> , National Gold Medal WMTC Mathematics Competition	Iran
2013	<b>Pass</b> , Passing the second Stage Of IMC Mathematics Competition	Iran

## Interests

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**Sport** I have played in the Mahram team in the youth category and after that I switched to street basketball.

**Cooking** I love cooking. I am an expert in most Indian-style cooking, enjoy baking and making my own pizza.

**Music** I am a Setar musician and used to compose music

**Art** I have always enjoyed drawing since I was a child. Recently, I work with graffiti

**Video Games** I always had the gaming gene. I mostly play on my PC.

## Languages

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**English** Upper Intermediate

**Persian** Native proficiency