

Sohrab Maleki

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Education

- **B.Sc. in Physics (Ongoing)**, Sep 2023 – Present
Sharif University of Technology (SUT), Tehran
GPA: 3.5 / 4.0
Relevant Coursework: Analytical Mechanics I-II, Quantum Mechanics I-II, Electromagnetism I-II, Solid State Physics, General Relativity, Group & Representation Theory, Advanced Quantum Mechanics (grad), Condensed Matter Physics (grad).
- **Diploma of Mathematics and Physics**, Sep 2020 – Jun 2023
Atomic Energy Highschool, Tehran
GPA: 3.8 / 4.0

Research Experiences

Research Project (Ongoing)

Cosmology & Condensed Matter Physics Analogies

Supervisor: Prof. Nima Khosravi, SUT.

- Studying *analogue gravity* models in condensed matter systems (BEC & acoustic).
- Investigating the cosmological inflation models with negative absolute temperature.

Academic Services

- **SINCE 2025** Leader & Organizer of "*Quanta Study Circles*", Physics Department, SUT.
 - Organized and led *Quantum Theory* study circle with emphasis on foundational topics and guided reading beyond standard coursework. (2025)
- **2023-2025** Lead-Editor of "*Takaneh*" the physics publication at Physics Department, SUT.
- **SINCE 2023** Co-Founder and tutor of "*Resonance*", an institute of physics olympiad studies.

Teaching Experiences

- **FALL 2025** Teaching Assistant of "*Quantum Mechanics II*" & "*Analytical Mechanics I*", Physics Department, SUT.
- **SPRING 2025** Teaching Assistant of "*Analytical Mechanics II*" & "*Quantum Mechanics I*", Physics Department, SUT.
- **FALL 2024** Teaching Assistant of "*Analytical Mechanics I*", Physics Department, SUT.
- **SINCE 2022** Physics Olympiad Tutor in various high-schools of Tehran.

Awards and Honors

- **AUG 2022 Silver Medal** in the National Physics Olympiad for Highschool Students
Iran's Young Scholars Club
- **SINCE 2022 Member** of Iran's National Elites Foundation
- **SINCE 2022 Member** of Iran's Young Scholars Club
- **FEB 2021 49th Place** in category C (206th in overall standings) in the 15th year of International Competition in physics of Fyziklani, Charles University Faculty of Mathematics and Physics
- **NOV 2021 39th Place** in Náboj Physics 2021 Competition between 185 Senior Teams and 41st Place between 357 International Teams
- **MAY 2019 3rd Rank** in 4th National Scholastic Festival of Ibn Sina for Scientific Seminar on Physics and Astrophysics, International Avicenna Research Center (IARC)

Languages

- Persian: Mother-tongue
- English: Fluent
- French: Basic knowledge
- German: Basic knowledge

Computational Skills

- **Programming:** Python, C, C++
- **Scientific Computing:** Mathematica, MATLAB
- **Systems:** Linux
- **Typesetting:** \LaTeX

Additional Academic Preparation

- Independent study of the historical development and foundations of quantum mechanics.
- self-study in classical field theory, open quantum systems, and quantum information theory.