

Sina Etebar

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Summary

- Highly motivated researcher with communication and problem-solving skills. I am experienced in theoretical modeling and data analysis resulting in a Silver Medal Award.
- A passionate physicist with 3+ years of experience as a Teaching Assistant.

Education

B.Sc. in Physics, Isfahan University of Technology 2017 - 2021
Thesis title: "The Role of Sterile Neutrinos to Explain Various Anomalies Observed in Neutrino Oscillation Experiments" GPA: 16.17 (out of 20)

Research Interests

- Particle Physics
- Dark Matter
- Neutrino Physics
- Cosmology
- BSM Physics
- Effective Field Theory

Experience

Teaching Assistant 2020 - 2024

Department of Physics, Isfahan University of Technology, Isfahan, Iran

Where I was a teacher's assistant in:

- | | |
|----------------------------------------------------|---------------------|
| ▪ Electrodynamics, Dr.Azar Tafrihi | Sep 2023 - Jan 2024 |
| ▪ Analytical Mechanics1, Dr.Farhang Loran Esfahani | Jan 2023 - Jul 2023 |
| ▪ Analytical Mechanics2, Dr.Soroush Shakeri | Jan 2023 - Jul 2023 |
| ▪ Analytical Mechanics1, Dr.Soroush Shakeri | Jan 2022 - Jul 2022 |
| ▪ Electromagnetism1, Dr.Azar Tafrihi | Sep 2020 - Jan 2021 |
| ▪ Analytical Mechanics2, Dr.Soroush Shakeri | Sep 2020 - Jan 2021 |

Conducted tutorials, graded assignments, mentored and guided students during office hours, organized and proctored exams and maintained regular communication with students.

Scientific President

Elected as President of the IUT Scientific Society of Physics Students

Isfahan University of Technology, Isfahan, Iran

Award & Honors

- Silver Medal Winner

[The University Physics Competition](#) is an international contest for undergraduate students. Teams of three students from colleges and universities worldwide spend a weekend analyzing a real-world scenario using physics principles. They then write a formal paper describing their work. Our team won a silver medal among 346 teams in 2020, with the guidance of faculty sponsor Dr. Soroush Shakeri.

- Full Scholarship for Bachelor of Science in Physics, Isfahan University of Technology, Isfahan, Iran, 2017
- Within the top 2% among 300,000+ participants in Iran's National University Entrance Exam for the undergraduate program, 2017

License & Certifications

- IV Joint ICTP-Trieste/ICTP-SAIFR School on Cosmology
- [IN2P3 School of Statistics SOS2021](#)
- [2nd CERN HEP C++ Course and Hands-on-Training](#)
- [13th Inverted CERN School of Computing](#)
- [Quantum 2020](#)
- [2020 Vienna Summer School on Gravitational Quantum Physics](#)

Publication

In Preparation:

1. S. Shakeri, S. Etebar, "Explaining the Heavy Sterile Neutrinos in DUNE"

Presentations

1. "Evidence of Sterile Neutrinos In Ground-Based Experiments", Isfahan University of Technology, Dec 2023
2. "Short-Baseline Neutrino Anomalies", Isfahan University of Technology, Jul 2022
3. "Dark Matter at Cosmological Phase Transitions", Isfahan University of Technology, Jan 2022
4. "Statistics and Neutrino Experiments", Isfahan University of Technology, Apr 2021

English Tests

IELTS (Academic): 7 (overall score)

Listening: 7.0, Writing: 6.5

Speaking: 7.0, Reading: 7.0

Test date: 12/02/2023

Computer Skills

- L^AT_EX, Python, Matplotlib, Jupyter, C++, Mathematica
Git, Illustrator, Microsoft Office, MadGraph, HTML, CSS, JavaScript

Hobbies

Traveling, History, Photography, Learning Languages

References

Soroush Shakeri

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Behrouz Mirza

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Azar Tafrihi

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Vahid Salari

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Physics

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