

Ehsan Fasihi Moghaddam

Jones Physical Science Center, Room 307-D
Columbia, S.C. 29208

✉ ehsanf@email.sc.edu

🌐 www.linkedin.com/in/lehsanfml

Curriculum Vitae

Education

- 2024-Current **Ph.D. in Physics**, *University of South Carolina, Columbia, SC, United States.*
2021-2024 **M.Sc. in Physics**, *GPA: 16.39/20, Sharif University of Technology, Tehran, Iran.*
2017-2021 **B.Sc. in Physics**, *GPA: 18.50/20, University of Guilan, Rasht, Iran.*

Research Interests

Quantum Field Theory

Conformal Field Theory, Effective Field Theory, Particle physics, Beyond the Standard Model

Cosmology

Brane World Cosmology, Inflation, Early Universe

General Relativity

String Theory

Achievements

- 2021 **Ranked 1st among B.Sc in Physics 2017 class in University of Guilan**, *Ranked 1st among 118 students*

Research Experiences

- 2023-2024 **Master Thesis: Cosmological Perturbation Theory in Brane Cosmology**
Supervisor: Dr. Ali Akbar Abolhasani
We tended to review cosmic inflation within the brane cosmology scenario and study the associated cosmological perturbation theory in the inflation, radiation-dominated and matter-dominated eras.
- 2022-2023 **Research Assistant: Dipole Cosmology**
Supervisor: Dr. M.M. Sheikh-Jabbari and Dr. Ehsan Ebrahimiyan
The main task was to research beyond homogeneous and isotropic cosmological models. My task was reviewing the dipole cosmology literature. Therefore, I studied some chapters of relativistic cosmology book by George F. R. Ellis, M. A. H. MacCallum, and Roy Maartens.
- B.Sc. Selected Course Project: Molecular Dynamics Simulation**
Supervisor: Dr. Seyyed Nader Rasuli
The project was provided in an Molecular Dynamics advanced course. My task was to simulate molecular dynamics by C++ in an introductory level.

Teaching Experiences

- 2024 **Teaching Assistant:** *PHYS Lab 201, Introductory Classical Mechanics Lab, Prof. Carl Rosenfeld, University of South Carolina, Department of Physics and Astronomy, Aug 2024 - Current.*
- 2023 **Teaching Assistant:** *Introduction to Cosmology, Dr. Shant Baghram, Sharif University of Technology, Department of Physics, Feb 2023 - Jun 2023.*
- 2022 **Teaching Assistant:** *Quantum Mechanics I, Dr. Laleh Memarzadeh, Sharif University of Technology, Department of Physics, Nov 2022 - Feb 2023.*
- 2022 **Teaching Assistant:** *Mathematical Physics II, Dr. Mohammad Reza Mohammadi Mozaffar, University of Guilan, Department of Sciences, Feb 2022 - Jun 2023.*
- 2022 **English Teacher:** *Teaching English as a Foreign Language, Zaban Ara English Language Institute, Tehran, Iran, Nov 2022 - May 2023.*

Technical Skills

Programming: Python, C++

Mathematical Programs: Wolfram Mathematica

Documentation: LaTeX

Language Skills

English: Fluent

Persian: Native

References

Dr. Ali Akbar Abolhasani - Assistant Professor of Physics at Sharif University of Technology and Resident Researcher at IPM.
ali.abolhasani@sharif.edu

Dr. Ehsan Ebrahimian - Postdoctoral Researcher of Physics at ICTP.
eebrahmi@ictp.it

Dr. Mahdi Torabian - Assistant Professor of Physics at Sharif University of Technology.
mahdi.torabian@sharif.ir

Dr. Mohammad Reza Mohammadi Mozaffar - Assistant Professor of Physics at University of Guilan and Resident Researcher at IPM.
mmohammadi@guilan.ac.ir

Dr. Shant Baghram - Associate Professor of Physics at Sharif University of Technology.
baghram@sharif.edu

Dr. S Nader Rasuli - Adjunct Scientist at IPM and Visiting Scientist at University of Cambridge.
rasuli@ipm.ir