

S. Mohammad Ahmadi

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Education

- M.Sc. University of Tehran**, Physics - Gravitation and Cosmology Jan 2023
- **Thesis:** Primordial Non-Gaussianities from Inflationary Universe
Advisor: Prof. Nahid Ahmadi
 - **GPA:** 3.5/4.0
- B.Sc. Ferdowsi University of Mashhad**, Physics July 2018

Research Interests

- Inflation (Theory and Observation)
- String Cosmology
- Primordial Black Holes/Gravitational Waves

Research Experience

- Inflation Model Building**, University of Tehran Jan 2023 – Present
- Developed a generalized model of constant-roll inflation.
 - Investigated the potential formation of primordial black holes in different inflationary scenarios.
 - Created a unified framework for analysing featured inflationary potentials.
 - Studying deviations from Gaussian statistics using both perturbative and non-perturbative methods.
 - Checking the validity of Maldacena's consistency relation.

Publications

- S. Mohammad Ahmadi**, Nahid Ahmadi, Mehdi Shokri May 2024
- Analytical Insights into Constant-Roll Condition: Extending the Paradigm to Non-Canonical Models, *JCAP* 05(2024)005 [🔗](#)

Standardized Tests

- IELTS Academic Test: 7.0/9.0** Nov 2022
- Listening: 7.0 – Reading: 8.0 – Writing: 6.0 – Speaking: 6.5
- GRE General Test: 321/340** Aug 2022
- Verbal Reasoning: 152/170 – Quantitative Reasoning: 169/170

Selected Conferences

- Iranian Conference on High Energy Physics, IPM** 2024
- Conference on Gravity and Cosmology 1400, Bu-Ali Sina University** 2022
- The Physics Society of Iran Annual Meeting 2021, University of Tehran** 2021
- Conference on Gravity and Cosmology 1398, University of Tehran** 2020

Work Experience

Onbik (E-Commerce Organisation), Founder

2015 – 2019

- I initiated my online business with a focus on importing, selling, and educating intellectual toys. I left the position to focus on my studies after being admitted to the University of Tehran.

Relevant Skills

- Wolfram Mathematica
- Python
- Microsoft Office
- Maple
- Latex
- WordPress

Hobbies

- Drawing
- Tennis
- Rubik's Cube
- Badminton

References

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