# Curriculum Vitae
# Faezeh Naderi

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**Research Interests:** Black holes, Cosmology, Higher Derivative Gravity, String Theory (string cosmology and black hole solutions in string theory), Quantum cosmology,
Application of QFT on curved 2D materials

**Previous position** Researcher at Azarbaijan Shahid Madani University (ASUM), Iran

**Education**

**Ph.D., High Energy Physics, 2011-2016**, ASUM, Tabriz, Iran

**M.S., Gravity and cosmology, 2008– 2011**, ASUM, Tabriz, Iran

**B.S., Solid state physics, 2004-2008**, Urmia University, Urmia, Iran

**Research Experiences**

**Researcher, 2020-present**

- Project Title: *Black hole solutions of Einstein-cubic gravity, thermodynamic geometry, and quasi-normal modes*
- Project Title: *Electrical properties of Graphen and Graphen-like materials with charge carriers living on a curved substrate using quantum field theory approach*
- Project Title: *Black hole solutions with Thurston type horizon geometries in Horava-Lifshitz gravity*

**Postdoctoral Researcher, July 2018-December 2019**

- Project Title: *Bianchi type black hole solutions with Thurston type horizon geometries in string theory*

**Ph.D., High Energy Physics,**

- Thesis Title: *Geometrical structures in gravitational models*
- Supervisors: Prof. Adel Rezaei-Aghdam and Prof. Farhad Darabi

**M.S., Gravity and cosmology,**

- Thesis Title: *Review on Hamiltonian constraint systems*
- Supervisor: Prof. Farhad Darabi
- Advisor: Prof. Adel Rezaei-Aghdam

**List of Publications**

1. F. Naderi, A. Rezaei-Aghdam, Quasinormal modes of three-dimensional black holes in string theory, conformal gravity, and Hu–Sawicki F(R) theory via the Heun function, Eur. Phys. J. C 84.12 (2024): 1-14, arXiv:2410.19658 [hep-th].
2. F. Naderi, K. Hasanirokh, Quantum transport of massless Dirac fermions through wormhole-shaped curved graphene in presence of constant axial magnetic flux, Scientific Reports 14.1 (2024) 7763.

3. K. Hasanirokh, F. Naderi (corresponding author) and H Mohammadpour, Theoretical studies on optical properties of Beltrami-shaped curved graphene, J. Phys. Condens. Matter 35 no. 29 (2023) 295702.
4. F. Naderi (corresponding author), A. Rezaei-Aghdam, Z. Mahvelati-Shamsabadi, Spatially homogeneous black hole solutions in $z = 4$ Horava-Lifshitz gravity in $(4 + 1)$-dimensions with Nil geometry and $H^2 \times R$ horizons, Eur. Phys. J. C 81 (2021) 865, arXiv:2106.03217 [hep-th]
5. F. Naderi (corresponding author), A. Rezaei-Aghdam, Classical and quantum $(2 + 1)$-dimensional spatially homogeneous string cosmology, Eur. Phys. J. C. 81 (2021) 23, [arXiv:2010.14157[gr-qc]]
6. K. Hasanirokh, F. Naderi, Coherent quantum transport through ferromagnetic graphene structures: Effects of Rashba spin–orbit coupling, Prog. Theor. Exp. Phys 7 (2020) 073I01.
7. F. Naderi (corresponding author), A. Rezaei-Aghdam, New five-dimensional Bianchi type magnetically charged hairy topological black hole solutions in string theory, Eur. Phys. J. C. 79 (2019) 995, arXiv:1905.11302[hep-th].
8. F. Naderi (corresponding author), A. Rezaei-Aghdam, F. Darabi, Non-critical anisotropic Bianchi type I string cosmology with $\alpha'$-corrections, Phys. Rev. D 98 (2018) 026009, arXiv:1712.03581[hep-th].
9. F. Naderi, A. Rezaei-Aghdam, Anisotropic homogeneous string cosmology with two-loop corrections, Nucl. Phys. B 923 (2017) 416-457, arXiv:1612.06074[hep-th].
10. F. Naderi, A. Rezaei-Aghdam, F. Darabi, String gravitational equations with Hermitian structure, Int. J. Mod. Phys. A. 31 (2016) 1650013, arXiv:1504.07895 [hep-th].
11. F. Naderi, A. Rezaei-Aghdam, F. Darabi, Gravity and induced matter on Nearly Kahler Manifolds , Int. J. Mod. Phys A 30 (2015)1550015, arXiv:1403.3916[hep-th].
12. F. Darabi, F. Naderi, Dirac quantization of noncommutative Abelian Proca field, Int. J. Theor. Phys 50 (2011) 3432, arXiv:1101.1573[hep-th].

**Work in progress**

- Curved graphen and graphen-like materials properties using QFT formalism
- Black hole solutions in string therory with unusuall topology
- Five-dimensional black hole solutions in string theory with higher-order curvature

**Awards**

Student Awards - Azarbaijan Shahid Madani University
Outstanding student Award, Ranked first among all Masters students of Physics 2011

**Presentations**

- 6th Workshop and Seminar on Topics in Theoretical Physics, Organized by ASUM, Iran 19-21 September 2019
- International Workshop Supersymmetries and Quantum Symmetries – SQS'19, Yerevan, Armenia 26-31 August 2019
- 2018 Joint FAR/ANSEF-ICTP and RDP-VW summer school in theoretical physics, Yerevan, Armenia 2-7 July 2018
- 4th Workshop and seminar on topics in theoretical physics, Tabriz, Iran, September 2016
- 7th National conference on Physics of Payame Noor University, Organized by ASUM, Tabriz, Iran April 2016

- 3th Workshop and seminar on topics in theoretical physics, Tabriz, Iran, September 2015
- 3th annual mathematical physics conference, Tabriz, Iran February 2013
- 7th National conference on Physics of Payame Noor University, Tabriz, Iran September 2011
- The Annual Physics Conference of Iran, Urmia, Iran, August 2011

**Other Schools and workshops attended**

- ICTP School on Geometry and Gravity(smr 3311), Trieste, Italy, 15-26 July 2019
- Recent Trends in String Theory and Related Topics, organized by IPM, Tehran, Iran, 21-25 April 2019
- 2th Conference and workshop on "Recent Trends in String Theory and Related Topics", Organized by IPM, Tehran, Iran, May 2017
- Conference and workshop on "Recent Trends in String Theory and Related Topics", Organized by IPM, Tehran, Iran, May 2016
- 3th Workshop and seminar on topics in theoretical physics, Organized by ASUM, Tabriz, Iran, September 2015
- IPM String School and Workshop, Organized by IPM, Tehran, Iran, April 2015

**Teaching Experience**

- Department of physics, Azarbaijan Shahid Madani University, Thesis advisor, Thesis Title: Black hole and cosmological solutions in Horava-Lifshitz Gravity
- Department of physics, Azarbaijan Shahid Madani University, Instructor
  - Fundamentals of Physics I (Classical Mechanics), 2013 -present
  - Fundamentals of Physics II (Electromagnetism), summer 2015, fall 2019
  - Fundamentals of Physics I Laboratory, 2013-present
  - Fundamentals of Physics II Laboratory, 2013-present
- Marand Islamic Azad University, Instructor
  - Foundations of Mechanics 2013-2019
  - Basic Physics 2013-2019
  - Electricity and Magnetism 2013-2019
  - Electronic 2018-2019
  - Teaching methods in science elementary fall 2019
- Kharvana Islamic Azad University, Instructor
  - Electronic 2018-present
  - Electronic laboratory 2018-present
  - Electricity and Magnetism 2018-present

**Activities**

- Member of Young researchers and elite club, Marand Branch, Islamic Azad University 2011 – Present
- Student Member Physics Society of Iran, 2010 – 2016
- Assistant of the executive committee of the workshop and seminar on topics in theoretical physics, Tabriz, Iran, 2013 – 2016

**Computer skills**

- Advanced: LaTeX, Maple, Microsoft Word, Power point
- Intermediate: Microsoft Windows

**Languages**

- Persian: mother tongue
- Azerbaijani Turkish: mother tongue
- Istanbul Turkish
- English

**References**


- Adel Rezaei-Aghdam, Ph.D.
  Professor of High Energy Physics
  Department of Physics
  Azarbaijan Shahid Madani University, Tabriz, Iran
  Email: rezaei-a@azaruniv.ac.ir
- Mohammad Atazadeh, Ph.D.
  Associate Professor of Gravity and cosmology
  Department of Physics
  Azarbaijan Shahid Madani University, Tabriz, Iran
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