Mohsen Khodadi (Curriculum Vitae)

Personal Information

Nationality: Iranian

Gender: Male

Marital Status: Married, 1 Children

Work Address (present):

1-Tehran, Tehran Urban Research and Planning Center:

Tehran Municipality.

2- Tehran, K. N. Toosi University of Technology,

Department of Physics, P. O. Box 15875-4416.

Work Address (previous):

1- Larak Garden, opposite Araj, Artesh Highway, School of Astronomy (SoA), Institute for Research in Fundamental Sciences (IPM) P. O. Box 19395-5531, Tehran, Iran.

2- Shiraz, University of Shiraz, Eram Paradise campus, College of Science, Department of Physics, Astrophysics and Cosmology Group.

3- Tehran, Khajeh Nasir (K. N.) Toosi University of Technology, Faculty of Physics (Astrophysics and Cosmology Group).

Residential Address: Tehran, Madani's Street, Next to

Imam Hossein Hospital, Eghdami's Alley. E-mail Address: mohsen.khodadi@gmail.com

Phone Number(s): (+098)9360682380 and (+98)9038401021

Education

University of Mazandaran (Click)

Ph.D., Theoretical Physics (Gravity and Cosmology), Oct 2014 – Aug 2018

- Thesis Topic: "Some Phenomenological Aspects of Quantum Gravity"
- Supervisor: Prof. Kourosh Nozari (Click)
- Advisor: Prof. Hamid Reza Sepangi (Click)

Shahid Beheshti University of Tehran (Click)

M.S., Particle Physics and Field Theory,

Oct 2010 – Aug 2012

- Thesis Topic: "Investigation of Species Quark-Hadron Phase Transition in Framework of Horava- Lifshitz Cosmology"
- Supervisor: Prof. Hamid Reza Sepangi (Click)

Professional Career(s) (from new to old)

- April 2024/Present (Homepage (Click)):
 EDITORIAL BOARD (MANAGING EDITOR & PUBLISHING
 PROCESS MANAGER), International Journal of Human Capital
 in Urban Management (IJHCUM), Published, Sponsored and Supported
 Financially by Tehran Urban Research and Planning Center (TURPC):
 Tehran Municipality.
- June/October- 2025 (Homepage (Click)): Research Visitorship, School of Physics, Institute for Research in

Fundamental Sciences (IPM), Tehran, Iran. I visited the Theoretical High Energy (THE) group led by Prof. Shahin Sheikh-Jabbari (Click).

E-mail: mohsen.khodadi@gmail.com

- 3. March 2024— March 2025 (Homepage (Click)):
 Postdoctoral Researcher Fellow Funded by "Educational and Research
 Institute of Defense Industries Basic Science Development Center",
 Hosted by the Department of Physics, K. N. Toosi University of
 Technology, Tehran.

 E-mail: khodadi@kntu.ac.ir
- 4. June/October- 2024 (Homepage (Click)):
 Research Visitorship, School of Physics, Institute for Research in
 Fundamental Sciences (IPM), Tehran, Iran. I visited the Theoretical
 High Energy (THE) group led by Prof. Shahin Sheikh-Jabbari
 (Click).

 E-mail: mohsen.khodadi@gmail.com
- 5. March/June 2024 (Homepage (Click)):
 Research Visitorship, School of Astronomy, Institute for Research
 in Fundamental Sciences (IPM), Tehran, Iran. I visited the theoretical
 cosmology and gravity (TCG) group led by Prof. Hassan Firouzjahi
 (Click).

 E-mail: mohsen.khodadi@gmail.com
- 6. Oct 2022 Oct 2023 (Homepage (Click)):
 Postdoctoral Researcher Fellow Funded by "Iran Science Elites
 Federation", Hosted by the Department of Physics, Shiraz University.
 I worked within the Astrophysics and Cosmology (APC) group led
 by Prof. Ahmad Sheykhi (Click).

 E-mail:
 m.khodadi@hafez.shirazu.ac.ir
- 7. July/Oct- 2022 (Homepage (Click)):
 Research Visitorship, School of Physics, Institute for Research in
 Fundamental Sciences (IPM), Tehran, Iran. I visited the Theoretical
 High Energy (THE) group led by Prof. Shahin Sheikh-Jabbari
 (Click).

 E-mail: m.khodadi@ipm.ir
- 8. April 2019 July 2022 (Homepage (Click)):
 Postdoctoral Researcher Fellow, School of Astronomy (SoA), Institute
 for Research in Fundamental Sciences (IPM), Tehran, Iran. I
 worked within the theoretical cosmology and gravity (TCG) group
 led by Prof. Hassan Firouzjahi (Click). E-mail: m.khodadi@ipm.ir

International Scientific Activities

A- Refereeing Scientific Papers for the Journals Released By International Publishers:

- 1. PHYSICAL REVIEW D (PRD)-APS PUBLISHING (Click), Count:11
- 2. JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS (JCAP)—IOP PUBLISHING (Click), Count: 3
- 3. PHYSICS OF THE DARK UNIVERSE (PDU)—ELSEVIER PUBLISHING (Click), Count:11
- 4. EUROPEAN PHYSICAL JORNAL C (EPJC)—SPRINGIER PUBLISHING (Click), Count: 2

- 5. SCIENTIFIC REPORTS-NATURE PUBLISHING (Click), Count: 2
- 6. CLASSICAL AND QUANTUM GRAVITY-IOP PUBLISHING (Click), Count: 3
- 7. NUCLEAR PHYSICS B-ELSEVIER PUBLISHING (Click), Count:
- 8. PHYSICS SCRIPTA-IOP PUBLISHING (Click), Count: 3
- 9. UNIVERSE—MDPI PUBLISHING (Click), Count: 1
- 10. MODERN PHYSICS LETTERS A-WORLD SCIENTIFIC PUBLISHING (Click), Count: 3
- 11. FRONTIERS IN ASTRONOMY AND SPACE SCIENCES (Click), Count:1
- 12. HELIYON-ELSEVIER PUBLISHING (Click), Count: 1
- 13. INDIAN JOURNAL OF PHYSICS-SPRINGIER PUBLISHING (Click), Count: 1
- 14. INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS—SPRINGIER PUBLISHING (Click), Count: 3

B- Invited as Guest Associate Editor in "Frontiers in Astronomy and Space Sciences".

C- Writing Educational Letters of Recommendation for Graduate School Applications:

- 1. To Andrew Frey, Adjunct Professor, Department of Physics and Astronomy, University of Manitoba (Click), AND Director, Winnipeg Institute for Theoretical Physics (Click), AND Affiliate Member, Perimeter Institute for Theoretical Physics (Click).
- 2. To Keshav Dasgupta, Associate Professor, Department of Physics and Astronomy, University of MacGill (Click).
- 3. To graduate studies AT Institute of Cosmos Sciences of the University of Barcelona (ICCUB), Spain (Click).

LINES OF RECHERCHE

My current research interests in theoretical cosmology and gravity fall within the following topics:

- 1. Early Universe Cosmology
- 2. Quantum Cosmology
- 3. Dynamics System Analysis of Cosmology Models
- 4. High Energy Astrophysics
- 5. Astroparticle Physics
- 6. Black Hole Physics and Phenomenology
- 7. Stochastic (Primordial) Gravitational Wave Background (SGWB)

Refereed International Journal Publications (from new to old)

- Mohsen Khodadi, Gaetano Lambiase, Leonardo Mastrototaro, Tanmay Kumar Poddar, Phys.Lett.B, 867 (2025) 139597, DOI: 10.1016/j.physletb.2025.139597
- Mohsen Khodadi, Sunny Vagnozzi, and Javad T. Firouzjaee, Sci.Rep. 14 (2024) 26932, DOI: s41598-024-78264-y (Nature Portfolio Publishing)
 *-The news coverage of this paper by Advanced Science News (Click)
- Mohsen Khodadi, and Javad T. Firouzjaee, Phys.Lett.B, 857 (2024) 138986 DOI: 10.1016/j.physletb.2024.138986
- Seyed Naseh Sajadi, Mohsen Khodadi, Orlando Luongo, Hernando Quevedo, Phys.Dark Univ., 45 (2024) 101525 DOI: 10.1016/j.dark.2024.101525
- Mohsen Khodadi, David. F. Mota, Ahmad Sheykhi, Journal of Cosmology and Astroparticle Physics (JCAP) 10 (2023) 034 DOI: 10.1088/1475-7516/2023/10/034
- Bita Farsi, Ahmad Sheykhi, Mohsen Khodadi, Phys.Rev.D 108, 023524 (2023) DOI: 10.1103/PhysRevD.108.023524
- Sunny Vagnozzi, Rittick Roy, Yu-Dai Tsai, Luca Visinelli, Misba Afrin, Alireza Allahyari, Parth Bambhaniya, Dipanjan Dey, Sushant G. Ghosh, Pankaj S. Joshi, Kimet Jusufi, Mohsen Khodadi, Rahul Kumar Walia, Ali Övgün, Cosimo Bambi, Class.Quant.Grav. 40, 165007 (2023) DOI: 10.1088/1361-6382/acd97b
 - *- At the Top List of the Important Articles in CQG (Click)
- Mohsen Khodadi, Gaetano Lambiase, Ahmad Sheykhi, Eur.Phys.J.C
 33, 386 (2023) DOI: 10.1140/epjc/s10052-023-11546-3
- 9. Sohan Kumar Jha, **Mohsen Khodadi**, Anisur Rahaman and Ahmad Sheykhi, **Phys.Rev.D** 107, 084052 (2023) **DOI:** 10.1103/PhysRevD.107.084052
- Mohsen Khodadi, Gaetano Lambiase, and Leonardo Mastrototaro, Eur.Phys.J.C 83, 239 (2023) DOI: 10.1140/epjc/s10052-023-11369-2
- Mohsen Khodadi, and Marco Schreck, Phys.Dark Univ. 39 (2023) 101170 DOI: 10.1016/j.dark.2023.101170
- 12. Mohsen Khodadi, Nuclear Physics B 985, 116014 (2022) DOI: 10.1016/j.nuclphysb.2022.116014
- Mohsen Khodadi, and Reza Pourkhodabakhshi, Phys.Rev.D 106, 084047 (2022) DOI: 10.1103/PhysRevD.106.084047
- Mohsen Khodadi, and Javad T. Firouzjaee,
 Phys.Dark Univ. 37, 101084 (2022) DOI: 10.1016/j.dark.2022.101084
- Mohsen Khodadi, Gaetano Lambiase, Phys.Rev.D 106 (2022) 10, 104050
 DOI: 10.1103/PhysRevD.106.104050
- Mohsen Khodadi, Alireza Allahyari, and Salvatore Capozziello,
 Phys.Dark Univ. 36 (2022) 101013 DOI: 10.1016/j.dark.2022.101013
- 17. Mohsen Khodadi, Phys.Rev.D 105 (2022) 2, 023025 DOI: 10.1103/PhysRevD.105.023025

- Mohsen Khodadi, and Reza Pourkhodabakhshi, Phys.Lett.B 823 (2021) 136775
 - **DOI:** 10.1016/j.physletb.2021.136775
- 19. **Mohsen Khodadi**, Ujjal Kumar Dey, Gaetano Lambiase, **Phys.Rev.D** 104 (2021) 6, 063039 **DOI:** 10.1103/PhysRevD.104.063039
- 20. Mohsen Khodadi, Gaetano Lambiase, David F. Mota, Journal of Cosmology and Astroparticle Physics (JCAP) 09 (2021) 028 DOI: 10.1088/1475-7516/2021/09/028
- Mohsen Khodadi, and Emmanuel N. Saridakis, Phys.Dark Univ. 32 (2021) 100835 DOI: 10.1016/j.dark.2021.100835
- 22. Mohsen Khodadi, Phys.Rev.D 103 (2021) 6, 064051 DOI: 10.1103/PhysRevD.103.064051
- 23. Afsaneh Rahmani, **Mohsen Khodadi**, Matin Honardoost, and Hamid Reza Sepangi, **Nuclear Physics B** 960 (2020) 115185 **DOI:** 10.1016/j.nuclphysb.2020.115185
- 24. Mohsen Khodadi, Alireza Allahyari, Sunny Vagnozzi, David F. Mota, Journal of Cosmology and Astroparticle Physics (JCAP) 2009 (2020) 026
 - **DOI:** 10.1088/1475-7516/2020/09/026
- Alireza Allahyari, Mohsen Khodadi, Sunny Vagnozzi, David F. Mota, Journal of Cosmology and Astroparticle Physics (JCAP) 2002 (2020) 003
 - **DOI:** 10.1088/1475-7516/2020/02/003
- 26. Mohammad Ali Gorji, Alireza Allahyari, **Mohsen Khodadi**, Hassan Firouzjahi, **Phys.Rev.D** 101, 12 124060 (2020) **DOI:** 10.1103/PhysRevD.101.124060
- 27. Kourosh Nozari, Milad Hajebrahimi, **Mohsen Khodadi**, Amir Etemadi, **Eur.Phys.J.C.** 79, 765 (2019) **DOI:** 10.1140/epjc/s10052-019-6986-y
- Mohsen Khodadi, Kourosh Nozari, Anha Bhat, Sina Mohsenian, Progress of Theoretical and Experimental Physics (PTEP), 2019 5 (2019) 053E03 DOI: 10.1093/ptep/ptz039
- 29. Salvatore Capozziello, **Mohsen Khodadi**, Gaetano Lambiase, **Phys.Lett.B**, **789 (2109) 626-633 DOI:** *10.1016/j.physletb.2019.01.004*
- Mohsen Khodadi, Kourosh Nozari, Fazolollah Hajkarim, Eur.Phys.J.C. 78 (2018), 716 DOI: 10.1016/j.physletb.2018.07.010
- 31. Mohsen Khodadi, Kourosh Nozari, Habib Abedi, Salvatore Capozziello, Phys.Lett.B 783 (2018) 326-333 DOI: 10.1016/j.physletb.2018.07.010
- 32. Mohsen Khodadi, Kourosh Nozari, Gen.Rel.Grav. 50 (2018) 88, DOI: 10.1007/s10714-018-2405-1
- 33. Mohsen Khodadi, Kourosh Nozari, Sanjib Dey, Anha Bhat, Mir Faizal, Sci.Rep. 8 (2018) 1659, DOI: 10.1038/s41598-018-19181-9 (Nature Portfolio Publishing)
- 34. Mohsen Khodadi, Kourosh Nozari, Emmanuel N. Saridakis, Class.Quant.Grav. 35 (2018) 015010, DOI: 10.1088/1361-6382/aa95aa

- 35. **Mohsen Khodadi**, Kourosh Nozari, Anahita Hajizadeh, **Phys.Lett.B** 770 (2017) 556-563, **DOI:** 10.1016/j.physletb.2017.05.016
- Mohsen Khodadi, Kourosh Nozari, Annalen der Physik 528 (2016) 785-795, DOI: 10.1002/andp.201600072
- 37. **Mohsen Khodadi**, Kourosh Nozari, Babak Vakili, **Gen.Rel.Grav.** 48 (2016) 64 **DOI**: 10.1007/s10714-016-2059-9
- 38. **Mohsen Khodadi**, Kourosh Nozari, Hamid Reza Sepangi, **Gen.Rel.Grav.** 48 (2016) 166 **DOI:** 10.1007/s10714-016-2160-0
- 39. Mohsen Khodadi, Yaghoub Heydarzade, Farhad Darabi, Emmanuel N Saridakis, Phys.Rev.D 93, 124019 (2016) DOI: 10.1103/PhysRevD.93.124019
- Kourosh Nozari, Mohsen Khodadi, Mohammad Ali Gorji, Europhysics Letters (EPL) 112 (2015) 60003 DOI: 10.1209/0295-5075/112/60003
- 41. **Mohsen Khodadi**, Yaghoub Heydarzade, Kourosh Nozari, Farhad Darabi, **Eur.Phys.J.C** 75 (2015) 590, **DOI:** 10.1140/epjc/s10052-015-3821-y
- 42. Mohsen Khodadi, Astrophys.Space Sci 358 (2015) 45, DOI: 10.1007/s10509-015-2450-0
- 43. Fatemeh Kheyri, **Mohsen Khodadi**, Hamid Reza Sepangi, **Eur.Phys.J.C.** 73 (2013) 2286, **DOI:** 10.1140/epjc/s10052-013-2286-0
- 44. Fatemeh Kheyri, **Mohsen Khodadi**, Hamid Reza Sepangi, **Annals of Physics** 332 (2012) 75, **DOI:** 10.1016/j.aop.2013.01.014

Preprints (New to Old)

1. **Mohsen Khodadi**, Alireza Talebian, Hassan Firouzjahi, arXiv:2501.14395 [gr-qc].

CITATIONS (2025):

Around 50 publications, with a total of more than 2000 citations; H-index = 22 (HIGH-ENERGY PHYSICS COMMUNITY HUB-SPIRES database), 23 (GOOGLE SCHOLAR database), and 23 (RESEARCHGATE database). [1 Renowned paper (500+ citations), 2 Famous paper (250-499 citations), 3 Very well-known papers (100-249), 4 Well-known paper (50-99).].

*- FOR MORE DETAILS ABOUT PUBLICATIONS, PLEASE CLICK THE LINKS BELOW:

"INSPIRE" AUTHOR PAGE.

"RESEARCHGATE" AUTHOR PAGE.

"GOOGLE SCHOLAR" AUTHOR PAGE.

BOOK

- Paul Davies., The Goldilocks Egnima: Why is the Universe Just Right for Life? Publication date-29 April 2008 (Translation to Persian)-In Progress
- "Quantum Mechanics" (for undergraduate students), Mohammad Reza Pahlavani and Mohsen Khodadi, University of Mazandaran Press (2014), ISBN 978-600-6545-50-9. (Click)

Conferences and Workshops Attended

- Participation in "Physics Spring Conference", held in School of Astronomy, Institute for Research in Fundamental Sciences (IPM) Tehran, June 24-25th, 2020
- Participation in "Mini-Workshop on Early Universe Cosmology", held in School of Astronomy, Institute for Research in Fundamental Sciences (IPM) Tehran,
 June 23th, 2019
- Participation in "Physics Spring Conference", held in School of Astronomy, Institute for Research in Fundamental Sciences (IPM) Tehran, June 12-13th, 2019
- Participation in one day meeting "Cosmology: from Theory to Observations", held in School of Astronomy, Institute for Research in Fundamental Sciences (IPM) Tehran,
 February 28th, 2018
- Participation in National Conference on Cosmology and Gravitation held by the Physics Society of Iran, University of Tehran, Feb 1-2th, 2012
- Accepted to participate in Summer School on Particle Physics, Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy Summer 2013

Talks and Presentations

- "Looking for Superradiance Black Hole in the Sky", School of Astronomy, IPM, Tehran, Iran, June 10 (2020).
- "Instability and no-hair paradigm in d-dimensional charged-AdS black holes", School of Physics, IPM, Tehran, Iran, Oct 6 (2020).
- "Rotating Black Holes, Powerful Energy Generators in the Universe: Superradiance and Stability of Kerr Black Hole Enclosed by Anisotropic Fluid Matter", Biruni Observatory, University of Shiraz, Shiraz, Iran, Jan 17 (2022).

Teaching Experiences

Lecturer

Fall Semester 2013

Fall Semester 2013

Fundamental Physics I (Mechanics and Heat)

Department of Engineering ,

Islamic Azad University (IAU)

Lecturer

Fundamental Physics I (Mechanics and Heat)

Department of Engineering,

Islamic Azad University (IAU)

Lecturer Spring Semester 2013

Fundamental Physics II (Electricity and Magnetism)

Department of Engineering,

Islamic Azad University (IAU)

Interests and Hobbies

- Instrumental music
- Iranian classic and pop music
- Classic and modern Persian poetry and literature

- Scientific, Philosophical as well as Historical (in particular, the contemporary history of Iran) Books
- Football and Cinema

References (Available On Request)

Prof. Kourosh Nozari (Click)

Theoretical Physics (Gravitation and Cosmology) E-mail: Knozari@umz.ac.ir Department of Physics, University of Mazandaran, Mazandaran, Iran Member of the Research Institute for Astronomy and Astrophysics of Maragha (RIAAM), Iran

Office Tel: 011-35302482

Prof. Hassan Firouzjahi (Click)

Office Tel: 021-26130674- 5
Theoretical Cosmology and Gravity
E-mail: firouz@ipm.ir
Faculty Member and Senior researcher (2008-present), School of Astronomy
(SoA), Institute for Research in Fundamental Sciences (IPM),
Head (2017-2023), School of Astronomy (SoA), Institute for Research in Fundamental
Sciences (IPM), Tehran, Iran

Prof. Ahmad Sheykhi (Click)

Theoretical Physics (Gravitation and Cosmology)

asheykhi@shirazu.ac.ir

Office Tel: ***

E-mail:

Department of Physics, College of Sciences, Shiraz University, Shiraz, Iran Biruni Observatory, College of Sciences, Shiraz University, Shiraz, Iran

Dr. Javad Taghizadeh Firouzjaee (Click)

Gravitational physics and Astrophysics E-mail: J.taghizadeh.f@ipm.ir Faculty Member (2019-present), Faculty of Physics, K. N. Toosi University of Technology

Resident Researcher, School of Physics, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran.

Member of the Executive Council of the Gravity and Cosmology Branch of the Iranian Physics Association (March 2021-present).

Prof. Hamid Reza Sepangi (Click)

Theoretical Physics (Gravitation and Cosmology)

hr-sepangi@sbu.ac.ir

Office Tel: 021-29902775

E-mail:

Faculty of Physics, Shahid Beheshti University of Tehran, Tehran, Iran

Prof. David Fonseca Mota (Click)

Theoretical Physics (Gravitation and Cosmology)

d.f.mota@astro.uio.no

Institute of Theoretical Astrophysics University of Oslo 0315, Oslo, Norway.

Prof. Salvatore Capozziello (Click)

Astronomy and Astrophysics E-mail: capozziello@na.infn.it University of Naples "Federico II", Italy Associated at the Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Napoli, with a Research Appointment in the Research Projects NA12 (Gravitation and Cosmology) and VIRGO-NA (Gravitational Waves), Italy

Associated at the Istituto Nazionale di A strofisica (INAF) with a Research Appointment in Cosmology and Relativistic Astrophysics

Member of the Gruppo Nazionale di Fisica Matematica – Istituto Nazionale di A lta Matematica (GNFM-INDAM) with a Research Appointment in Relativity and Field Theory

Associated at CERN (Theoretical Division)

Prof. Emmanuel N. Saridakis (Click)

Theoretical Physics (Gravitation and Cosmology)
msaridak@phys.uoa.gr

Physics Department, National Technical University of Athens, 15780 Zografou Campus, Athens, Greece

Senior Researcher in National Observatory of Athens, Greece

Adjunct professor of theoretical physics, Physics Department, Baylor University, Texas 76798-7316, USA

Prof. Gaetano Lambiase (Click)

Gravitational physics and Astrophysics E-mail: lambiase@sa.infn.it Dipartimento di Fisica E.R. Cainaiello, University of Salerno, Via Giovanni Paolo II, I 84084-Fisciano (SA), Italy

INFN, Gruppo Collegato di Salerno, Sezione di Napoli, Via Giovanni Paolo II, I 84084-Fisciano (SA), Italy

Dr. Sunny Vagnozzi (Click)

Gravitational physics and Astrophysics E-mail: sunny.vagnozzi@ast.cam.ac.uk Department of Physics, University of Trento, Italy (2023-present)

Kavli Institute for Cosmology (KICC) and Institute of Astronomy, University of Cambridge, Madingley Road, Cambridge CB3 0HA, United Kingdom (2019-2022)

Editor in Physics of Dark Universe Journal (PDU) (2023–present) Associate Editor in Universe Journal (MDPI)

Dr. Luca Comisso (Click)

Office Tel: ****

E-mail:

Plasma Astrophysicist E-mail: luca.comisso@columbia.edu Associate Research Scientist, Department of Astronomy, Columbia Astrophysics Laboratory, Columbia University, 550 W 120th Street, New York, NY, 10027,

USA