

Curriculum Vitae

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Personal Information

Gender: Male	Surname: Vahidinia
Date of Birth: 13/May/1985	Name: Mohammad Hassan
Place of Birth: Shiraz, Iran	Official email: vahidinia@ipm.ir
Nationality: Iranian	Personal email: vahidinia@gmail.com
Martial Status: Married	
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Present Status

- Assistant Professor (2018 - Present), School of Physics, IASBS, Iran
- Part time researcher (2018 - Present), School of Physics, IPM, Iran

Past Status

- Long term visitor (2017-2018), School of Physics, IPM, Iran
- Vistor (2017-2017), ICTP, Tireste, Italy
- PostDoctoral Associate (2014 - 2017), School of Physics, IPM, Iran
- Assistant Professor (2013 - 2014), Dep. of Physics, Salman Univ. of Kazerun, Iran

Academic Qualifications

- PhD. in Gravity and Cosmology (2009 -2013) Shiraz Univ., Iran
Thesis's Title: AdS/CFT in Higher Curvature Theories of Gravity
Supervisor: Prof. Mohammad Hossein Dehghani
- M.Sc. in Particle Physics (2007 - 2009) Ferdowsi Univ. of Mashhad, Iran
Thesis's Title: Thermodynamics of Membranes in M-Theory
Supervisor: Prof. Ahmad Ghodsi
- B.Sc. in Physics (2003 - 2007) Dep. of Physics, Islamic Azad Univ. of Shiraz, Iran

Interest Area of Research

- AdS/CFT, Black Holes, Holographic Entanglement Entropy

Honors

- Ranked 1st in Dep. of Physics among M.Sc. students of particle physics 2007 intake
- Ranked 2nd in Dep. of Physics among B.Sc. students of physics 2003 intake
- Distinguished student of High School of Shiraz Univ.

Publications

- S.M. Noorbakhsh, M.H. Vahidinia "Extremal Vanishing Horizon Kerr-AdS Black Holes at Ultraspinning Limit" JHEP, 1801 (2018) 042.

- S. Sadeghian, M.H. Vahidinia “AdS₃ to dS₃ transition in the near horizon of asymptotically de Sitter solutions” Phys. Rev. D 96, 044004 (2017).
- M. Alishahiha, A. F. Astaneh, A. Naseh and M.H. Vahidinia, “On complexity for F(R) and critical gravity,” JHEP, 05 (2017) 009.
- M.R. Mohammadi Mozaffar, A. Mollabashi, M.M. Sheikh-Jabbari, M.H. Vahidinia “ Holographic Entanglement Entropy, Field Redefinition Invariance and Higher Derivative Gravity Theories ,” Phys. Rev. D 94, 046002 (2016).
- S. Sadeghian, M.M. Sheikh-Jabbari, M.H. Vahidinia, H. Yavartanoo, “ Three Theorems on Near Horizon Extremal Vanishing Horizon Geometries ,” Phys.Lett. B753 (2016) 488-492.
- S. Sadeghian, M.M. Sheikh-Jabbari, M.H. Vahidinia, H. Yavartanoo, “Near Horizon Structure of Extremal Vanishing Horizon Black Holes,” Nucl. Phys. B 900 (2015) 222-243.
- M. H. Dehghani and M. H. Vahidinia, “Quartic Quasi-topological Gravity, Black Holes and Holography,” JHEP, 1310 (2013) 210.
- M. H. Dehghani, C. Shakuri and M. H. Vahidinia, “Lifshitz black brane thermodynamics in the presence of a nonlinear electromagnetic field,” Phys. Rev. D 87, 084013 (2013).
- S. H. Hendi and M. H. Vahidinia, “P-V criticality of higher dimensional black holes with nonlinear source,” Phys. Rev. D 88 (2013) 8, 084045.
- M. H. Dehghani and M. H. Vahidinia, “Surface Terms of Quasitopological Gravity and Thermodynamics of Charged Rotating Black Branes,” Phys. Rev. D 84, 084044 (2011).[hep-th].
- M. H. Dehghani, A. Bazrafshan, R. B. Mann, M. R. Mehdizadeh, M. Ghanaatian and M. H. Vahidinia, “Black Holes in Quartic Quasitopological Gravity,” Phys. Rev. D 85, 104009 (2012).[hep-th].

Seminars

- AdS₃ to dS₃ transition in the near horizon of Kerr-(A)dS black holes, Yerevan (July 2018) (Invited)
- Complexity in higher curvatures gravity, Workshop and seminar on recent developments in theoretical physics, Madani Univ., Tabriz (August 2017) (Invited)
- On complexity for F(R) and critical gravity, Recent Trends in String Theory and Related Topics, IPM, Tehran (May 2017)
- Holographic Entanglement Entropy and Field Redefinition, Workshop and seminar on recent developments in theoretical physics, Madani Univ., Tabriz (September 2016) (Invited)
- Holographic Entanglement Entropy of Higher Curvatures Gravities from Field Redefinition, Quantum Aspects of Black Holes and its Recent Progress , Yerevan (August 2016)
- Gravity, Spacetime and Entanglement, Iran Univ. of Science & Technology, Tehran (May 2016) (Invited)
- Holographic Entanglement Entropy for Higher Derivative Gravity Theories from Field Redefinition, Univ. of Tehran, Tehran (April 2016) (Invited)
- Holographic Entanglement Entropy, Field Redefinition and Higher Derivative Gravity Theories, IPM, Tehran (April 2016)
- Near horizon of (near)EVH black holes, ICTP Conference on Recent Progress in Quantum Field Theory and String Theory, Yerevan (September 2015)
- Near horizon structure of EVH black holes, Workshop and seminar on recent developments in theoretical physics, Madani Univ., Tabriz (September 2015)
- Holographic entanglement entropy and emergent gravity, Shahrood Univ. of Technology, Shahrood (March 2015) (Invited)
- Spacetime and entanglement, Shahid Beheshti Univ., Tehran (February 2015) (Invited)

- Quasi-topological gravity and AdS/CFT, IPM, Tehran (September 2014)
- Introduction to relativity and gravity, One Day Workshop on Cosmology, Shiraz Univ., Shiraz (February 2009)
- Tides and Earthquake?, Conferences on Astronomy, Islamic Azad Univ. of Maybod, Yazd (May 2005)

Publications in Persian

- M. H. Vahidinia, “ Importance of Quantum Gravity”, Tabesh Magazine, Spring 2011.
- M. H. Vahidinia, “ Gravity as an Entropy Force? ”, Manshor Magazine, Spring 2012.

Workshops and Conferences Attended

- The CODATA-RDA Research Data Science Applied workshops on Extreme sources of data, ICTP, Trieste (July 2017)
- Recent Trends in String Theory and Related Topics, IPM, Tehran (May 2017) (with talk)
- Workshop and seminar on recent developments in theoretical physics, Madani Univ., Tabriz (September 2016) (with talk)
- Quantum Aspects of Black Holes and its Recent Progress , Yerevan (August 2016) (with talk)
- Fourth Summer School on High Energy Physics and Quantum Field Theory , Yerevan (August 2016)
- IPM String School, Spring 2016, Tehran, Iran (organizer)
- ICTP Spring School on Superstring Theory and Related Topics, Spring 2016, Trieste, Italy
- Tehran Univ. workshop on Quark-Gluon-Plasma and Holography, Fall 2015, Tehran, Iran
- IPM workshop on xAct, Summer 2015, Tehran, Iran
- ICTP Conference on Recent Progress in Quantum Field Theory and String Theory, Summer 2015, Yerevan, Armenia (with talk)
- Supersymmetry in Integrable Systems - SIS'15, Summer 2015, Yerevan, Armenia
- Workshop on Recent Progress in Theoretical Physics, Summer 2015, Madani Univ., Tabriz, Iran (with talk)
- IPM String School and Workshop, Spring 2015, Tehran Iran
- Workshop on Recent Progress in Theoretical Physics, Summer 2014, Madani Univ., Tabriz, Iran
- School and Workshop on Applied AdS/CFT, Fall 2011, IPM Tehran, Iran
- Workshop on Recent Progress in Theoretical Physics, Summer 2011, Azarbaijan Univ., Tabriz, Iran
- IPM School and Workshop on Applied AdS/CFT, Spring 2011, Isfahan, Iran
- Workshop on Casimir Effect and Its Application, Summer 2010, IPM, Tehran, Iran
- IPM School on Early Universe Cosmology (IEUC09), Winter 2009, IPM, Tehran, Iran
- Workshop on Gravity, Winter 2007, Ferdowsi Univ. of Mashhad, Mashhad, Iran

Ph.D. and M.Sc. Seminars

- Intersection of M2 and M5 Brane in M-Theory
- Higher Dimensional Universe, (Fall Semester 2009)
- Simple Way for Construction Penrose Diagrams, (Fall Semester 2009)
- Holography, Black Hole and AdS/CFT, (Fall Semester 2009)
- Horizon, Surface Term and Thermodynamics of Black Holes , (Winter Semester 2012)
- Practical AdS/CFT, (Winter Semester 2013)

Instructor

- Fundamental Physics I and II (Shiraz Univ. and Salman Univ.)
- Modern Physics (Salman Univ.)
- Special Relativity (Salman Univ. and IASBS)
- Astrophysics and Cosmology (Salman Univ.)
- Thermodynamics (Salman Univ.)
- Analytical Mechanics I and II (Salman Univ.)
- Electromagnetism I and II (Salman Univ.)
- Quantum Mechanics I (Salman Univ.)
- Mathematical Physics (Salman Univ.)
- Quantum Field Theory I (IASBS)

Teacher Assistance

- Quantum Field Theory II ,IPM, (2016)
- Advanced general relativity, IPM, (2015)
- Electrodynamics, Shiraz Univ., (2011)
- Gravity I, Shiraz Univ., (2011)
- Electromagnetism I, Shiraz Univ., (2010)
- Modern Physics, Shiraz Univ., (2010)
- Statistical Mechanics, Shiraz Univ., (2009)
- Mathematical Physics I, II, Shiraz Univ., (2009)
- Physics I,II, Shiraz Univ., (2010)
- Physics I, Islamic Azad Univ. of Mashhad, (2008)

Other Activities

- Director of Shiraz Astronomical Society (NGO for Amateur Astronomers), Shiraz, Iran, (2005-2006)
- Director of Students Physics Society, Islamic Azad Univ., Shiraz, Iran, (2006-2007)

Computer Skills

- **General:** Mathematica, Maple, Cadabra, Latex
- **Programming Languages:** Python
- **Operating Systems:** Microsoft Windows, Linux

References

- Prof. M. M. Sheikh-Jabbari, School of Physics, IPM
email: jabbari[at]theory.ipm.ac.ir
- Prof. M. H. Dehghani, Dep. of Physics, Shiraz Univ.
email: mhd@shirazu.ac.ir
- Prof. N. Riazi, Dep. of Physics, Shahid Beheshti Univ.
email: n-riazi[at]sbu.ac.ir
- Prof. A. Ghodsi, Dep. of Physics, Ferdowsi Univ. of Mashhad
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