

Curriculum Vitae



Personal data and academic degrees:

1. **First name:** Khaled
2. **Surname:** Saaidi
3. **Ph.D., Tehran University, Tehran, Iran (2001)**
4. **M.Sc., Sharif University and Technology, Tehran, Iran (1997)**
5. **B.Sc., Amirkabir University of Technology, Tehran, Iran (1993)**

My Interests:

My research interest area was covering the particle physics and quantum field theory especially two-dimensional Yang - Mills theory. The surprising discovery of cosmic acceleration in last decade has joined some fundamental unsolved problems such as: the origin of baryon asymmetry, the origin of inflation, the nature of dark matter and dark energy, and the physics of early universe.

I am working in the construction and investigation some models which can explain the fundamental physics origin of some or all of these unsolved problems. Therefore, my work has been spanned with in the modern cosmology and high energy physics. For these goals I will study some models such as: scalar field theory; extra dimensional models of cosmology and particle physics; and also one of the most-studied approaches to the idea that a modification of general relativity may explain cosmic acceleration.

Positions:

1. Professor in theoretical Physics in University of Kurdistan, Sanandaj, Iran (2012-present)

2. Visiting Scholar, Kansas State University, Manhattan, Kansas, US (2011-2012)
3. Associated Professor, University of Kurdistan, Sanandaj, Iran, (2008 - 2012)
4. Assistant Professor, University of Kurdistan, Sanandaj, Iran, (2001-2008)
5. Member of the Physical Society of Iran, (2006-present).
6. Member of the Physical Society of America, (2012-2013).
7. Member of the Physical Society of Europe, (2012-2013).
8. Non-Residence Researcher at: Institute for Studies in Theoretical Physics and Mathematics (IPM), (2001-2006).

Executive Activities

Nm	subject	Date
1	Dean of School Campus of University of Kurdistan	2001 Sep - 2005 Sep
2	Member of University Educational Council in University of Kurdistan	2001 Sep - 2005Sep
3	Member of Basic Sciences Commission In Kurdistan Province	2001 Nov - 2003 Nov
4	Member of Special Cases Commission	2001 Oct - 2003 Oct
5	Member of Faculty Graduate Studies Council in University of Kurdistan	2003 Jun - 2005 Jun
6	Member of administrative change Committee in University of Kurdistan	2003 Jul - 2005 Jul
7	University President Adviser in University of Kurdistan	2004 May - 2006 May
8	Member of University Steering Committee in University of Kurdistan	2005 Jan - 2007 Jan
9	Member of Informatics Council in University of Kurdistan	2004 Oct - 2006 Oct
10	Dean of Faculty of Science, University of Kurdistan	2005 Oct - 2008 Oct
11	Member of Research and Education Council of Faculty in University of Kurdistan	2005 Oct - 2005 Oct
12	Responsible for launching Science and Technology Park of Kurdistan	2012 Dec - 2013
13	Administrator of Science and Technology Park of Kurdistan	2013 Jun - 2015
14	Chairman of Council of Science and Technology Park of Kurdistan	2013 Dec - Present
15	Member of knowledge-based companies Diagnosis Committee in ministry of science, research and technology	2014 Feb - 2015
16	Member of National Headquarters, Research and Technology Committee in ministry of science, research and technology	2015 Oct - 2015
17	Member of Professional Group of Research and Technology Commission in ministry of science, research and technology	2015 Jun - Present
18	Secretary of the 5rd Festival "Science until Practice"	2015 Feb - 2015
19	Minister Representative in audit board of University of Kurdistan	2014 Nov - Present

20	Member of Monitoring and Assistance Committee for Establishing knowledge-based companies in Kurdistan province	2014 Jul - Present
21	Chairman of Science and Technology Park of Kurdistan	2015 Nov - Present

Certificates:

1- STP Development and Management & STPs and Technology Transfer.

(In Isfahan, IRAN, on May 9, 2014)

2- International Training Workshop on Technological innovation for Small and Medium-sized Enterprises based on Science and Technology

(Since June 15 to 22, 2014 in Beijing, China)

Publications:

1. N. Nazavari, A. Mohammadi, **Kh. Saaidi**, “Intermediate inflation driven by DBI scalar field”. **Physical Review D. Volume: 93. Issue: 12. 2016**
2. S. W. Rabiei, H. Sheikahmadi, Kh. Saaidi, A. Aghamohammadi, “Interacting scalar tensor cosmology in light of SNeIa, CMB, BAO and OHD observational data sets”, **Eur. Phys. J. C (2016) 76:66; arXiv:1502.05952 [astro-ph.CO]**.
3. H. Sheikahmadi, S. Ghorbani and **Kh. Saaidi**, “Non-local scalar fields inflationary mechanism in light of Planck 2013”, **Astrop. Space Sci. 357, No. 115 (2015)**.
4. Haidar Sheikahmadi, Ali Aghamohammadi, **Khaled Saaidi**, “Non-commutative and commutative vacua effects in a scalar torsion scenario”, **Phys. Lett. B 749, 231 (2015)**.
5. A. Mohammadi, Z. Ossoulia, T. Golanbari, **Kh. Saaidi**, “Intermediate inflation with modified kinetic term”, **Astrop. Space Science 359, 7 (2015)**.
6. **Kh. Saaidi**, A. Mohammadi, and T. Golanbari, “Light of Planck-2015 on Noncanonical Inflation”, **Advances in High Energy Physics, 2015, Article ID 926807 (2015)**.
7. T. Golanbari, A. Mohammadi, Z. Ossoulia, **Kh. Saaidi**, “Quark-Hadron Phase Transition in DGP Brane Gravity with Bulk Scalar Field”, **Astrop. Space Science 357, 159 (2015)**.
8. A. Aghamohammadi, T. Golanbari, A. Mohammadi, **Kh. Saaidi** “Hamilton-Jacobi formalism for tachyon inflation “**Phys. Rev. D 90, 084028 (2014)**.

9. T. Golanbari, A. Mohammadi, **Kh. Saaidi** “Brane inflation driven by noncanonical scalar field” **Phys. Rev. D 89, 103529 (2014).**
10. T. Golanbari, A. Mohammadi, **Kh. Saaidi** “QCD phase transition with a power law chameleon scalar field in the bulk” **Int. J. Mod. Phys. A 29, 1450033 (2014)**
11. A. Pavlov, S. Westmoreland, **Kh. Saaidi**, B. Ratra “Nonflat time-variable dark energy cosmology” **Phys. Rev. D 88, 123513 (2013)**
12. A. Aghamohammadi · **Kh. Saaidi** · A. Mohammadi · H. Sheikhahmadi · T. Golanbari · S.W. Rabiei “Effect of an external interaction mechanism in solving agegraphic dark energy problems” **Astro. Space Sci. 345 (2013) 17**
13. **Kh. Saaidi**, and H.aidar Sheikhahmadi, S. W. Rabiei, T. Golanbari “On the holographic dark energy in chameleon Brans Dicke cosmology” **Astro. Space Sci. 348 (2013) 233**
14. **Kh. Saaidi**, A.Aghamohammadi, B. Sabet, M. O. Farooq “Ghost dark energy in $f(R)$ model of gravity” **Int. J. Mod. Phys. D 21, 1250057 (2012)**
15. **Kh. Saaidi**, B. Ratra, A. Mohammadi, T. Golanbari, H. Sheikhahmadi, “Quark-hadron phase transition in a chameleon Brans-Dicke model of brane gravity” **Phys. Rev. D 86, 045007 (2012)**
16. **Khaled Saaidi**, “Stability of Ghost Dark Energy in CBD Model of Gravity”
17. **Khaled Saaidi**, “(Non-) geodesic motion in Brans Dicke model with matter-scalar field coupling” **Astro. Space Sci. 345 (2013) 431**
18. **Kh. Saaidi**, A. Aghamohammadi “Reconstructing $f(R)$ model from Holographic DE: Using the observational evidence” **(Phys. Scr. 86 (2012) 025007 (6pp))**
19. **Khaled Saaidi**, A. Aghmohammadi, H. Hossienkhani, “Modified gravity in a viscous and non-isotropic background” **(Astrophys Space Sci (2012) 341:657–662)**
20. **Khaled Saaidi**, A. Mohammadi, “Brane Cosmology with the chameleon scalar field in bulk” **(Phys. Rev. D 85, 023526 (2012))**
21. **Khaled Saaidi**, H. Shaikhahmadi, A. Mohammadi, “Interacting new agegraphic dark energy in a cyclic universe” **(Published in Astrophysics and Space Science with DOI 10.1007/s10509-0110944-y (2012))**

22. **Khaled Saaidi**, H. Shaikhahmadi, A. Mohammadi, “ γ Parameter and Solar System constraint in Chameleon Brans Dick Theory” **Phys. Rev. D 83, 104019 (2011)**
23. **Khaled Saaidi**, S. W. Rabiei, A. Aghmohammadi “Revised spherically symmetric solutions of $R+\nu\epsilon/R$ gravity” **(Int J Theor Phys (2011) 50:2514–2519)**
24. **Khaled Saaidi**, H. Shaikhahmadi, “New Potential in Chameleon Mechanism” **(Astrophys Space Sci (2011) 333: 501–505)**
25. **Khaled Saaidi**, H. Hossienkhani, “Gravitational Baryogenesis in Anisotropic Universe” **(DOI 10.1007/s10509-010-0580-y, Astrophys. Space Sci)**
26. **Khaled Saaidi**, A. Mohammadi “Brane Cosmology With generalized Chaplygin Gas in The Bulk” **Mod. Phys. Lett. A, Vol. 25, No. 36 (2010) pp. 3061-3068**
27. **Khaled Saaidi**, A. Aghmohammadi "Holographic dark energy with time depend gravitational constant in the non-flat Ho \check{r} Sava-Lifshitz cosmology" **Astrophys Space Sci (2011) 332: 503–507)**
28. **Khaled Saaidi**, A. Aghmohammadi “Holographic Dark Energy and $f(R)$ Gravity” **(Phys. Scr. 82 (2011) 000000 (4pp)**
29. **Khaled Saaidi**, A. Aghmohammadi “Equivalence Principle (EP) and Solar System Constraints on $R(1\pm\epsilon\ln(\frac{R}{R_c}))$ model of Gravity” **(Astrophys Space Sci (2011) 333: 327–331)**
30. **Khaled Saaidi**, A. Aghmohammadi, A. R. Abolhasani, Aram Vajdi “Spherical Symmetric Solution in $f(R)$ Model Around Charged Black Hole “ **(Int. J. Theor. Phys. (2010)49: 709)**
31. **Khaled Saaidi**, A. Aghmohammadi, A. R. Abolhasani, Aram Vajdi, “Standard Cosmological Evolution in $f(R)$ Model to Kaluza -Klein Cosmology” **Phys. Scripta 80 :065008, (2009)**
32. **Khaled Saaidi**, Aram Vajdi, A. Aghmohammadi,” Static Spherically Symmetric Solution of $(R-\mu^4 R)$ ”, **Gen Relativ. Gravit. (2010)42: 2421**
33. **Kh. Saaidi**, G. Ghafari, M. M. Soltanzadeh, “Negativity as Entanglement Degree of a non-Hermitian Model “**Int. J. Theor. Phys (2009) 48: 1659–1668**
34. **Khaled Saaidi**” Scalar Particles Creation and Dynamical Casimir effect” **Int, Rev. of Phys. 2, (2008) 218.**

35. **Khaled Saaidi** " Non-local 2D Generalized Yang-Mills theories on arbitrary surfaces with boundary" **Phys. Scr. 78 (2008) 015102 (4pp)**
36. **Khaled Saaidi**, E. Karimi, Kh. Heshami, P. Seifpanahi "Non-Hermitian Interaction Of Radiation And Matter" **Phys. Scr. 77 (2008) 0065002 (6pp)**
37. M. R. Setare, **Khaled Saaidi**" Spin Zero Quantum Relativistic Particles in Einstein Universe" **Int. J. Theor. Phys. 43 (2004)421-424**
38. **Khaled Saaidi**. " Eigenvalue Spectrum of a Dirac Particle in Static and Spherical Complex Potential" **Int. J. Theo. Phys. 44(2004) 595.**
39. **Khaled Saaidi**. "Large-N limit of non-local 2D generalized Yang-Mills theories on nonorientable surface" **Int. J. Mod. Phys. A19 (2004) 2123-2130**
40. **Khaled Saaidi**, Mohammad Khorrami. "Large-N limit of the non-local 2D Yang-Mills and generalized Yang-Mills theories on a cylinder" **Eur. Phys. J. C23 (2002) 757-760 hep-th/0304204**
41. **Khaled Saaidi**." More on Phase Structure of Nonlocal 2D Generalized Yang-Mills Theories (nlgYM2's)" **Int. J. Mod. Phys. A17 (2002) 3641-3648 hep-th/0202170**
42. H. Mohseni. Sadjadi, **Khaled Saaidi**. " Q^-Q potential in the Schwinger model on curved space" **Phys. Rev. D63 (2001) 065009; Erratum-ibid. D64 (2001) 049901**
43. **Khaled Saaidi**, H. M. Sadjadi "Generating Functional and Large N-Limit of Nonlocal 2D Generalized Yang-Mills Theories (nlgYM2's)" **Eur. Phys. J. C18 (2001) 613-618**
44. M. Alimohammadi, **Khaled Saaidi**. "More on generalized simplicial chiral models" **Int. J. Mod. Phys. A16 (2001) 1161**
45. **Khaled Saaidi**, Mohammad Khorrami." Nonlocal two-dimensional Yang-Mills- and generalized Yang-Mills-theories" **Int. J. Mod. Phys. A15 (2000) 4749-4759**

Papers presented at national and international scientific assemblies:

1. A. Mohammadi, N. Nazavari, **Kh. Saaidi**, "Exponential inflation with non-canonical scalar field and observational data", **19th research meeting on astronomy, 12 and 13 May 2016, Zanjan, Iran.**

2. T.Golanbari, Z. Ossouliau, A. Mohammadi, **Kh. Saaidi**, “Investigation of non-Canonical Intermediate Inflation in light of Planck 2015”, **18th research meeting on astronomy, 15 and 16 September 2015, Zanjan, Iran.**
3. Z. Ossouliau, T. Golanbari, **Kh. Saaidi**, “**Cosmological consequences of a non-canonical scalar field**”, **18th research meeting on astronomy, 15 and 16 September 2015, Zanjan, Iran.**
4. A. Mohammadi, T. Golanbari, **Kh. Saaidi**, “Quark-Hadron phase transition in the brane world scenario”, **Particle Physics and Fields conference, 18 and 19 February 2015, Shahid-Beheshti University, Tehran, Iran.**
5. T. Golanbari, A. Mohammadi, Z. Ossouliau, **Kh. Saaidi**, “Noncanonical inflation with Planck and BICEP2”, **National Conference of Gravity and Cosmology, 21 and 22 January 2015, Sharif University of Technology, Tehran, Iran**
6. T.Golanbari, **Kh. Saaidi**, A. Mohammadi, A. Aghamohammadi, “Brane scalar field on quark-hadron phase transition”, **National Conference of Gravity and Cosmology, 29 and 30 January 2014, University of Tehran, Tehran, Iran**
7. A. Mohammadi, T. Golanbari, **Kh. Saaidi**, “Studying inflation driven by non-canonical scalar field”, **National Conference of Gravity and Cosmology, 29 and 30 January 2014, University of Tehran, Tehran, Iran**
8. T. Golanbari, **Kh. Saaidi**, “The effect of bulk chameleon scalar field on quark-hadrons Phase Transition”, **National Conference of Gravity and Cosmology, 30 and 31 January 2013, Shahid-Beheshti University, Tehran, Iran**
9. H. Sheikahmadi, A. Aghamohammadi and **Kh. Saaidi**, “ Investigation the stability of ghost and Chaplygin models of dark energy by means of observational constraints in an interacting mechanism”, **18th meeting on Astronomy and Astrophysics, IASBS, Zanjan, Iran, 24-25 May (2015), Presented as oral paper.**
10. H. Sheikahmadi and **Kh. Saaidi** “Vacuum quantum fluctuations and dark energy”, **22nd IPM Physics Spring Conference, Iran, 20-21 May (2015), Presented as poster paper.**
11. **Kh. Saaidi**, H. Sheikahmadi. “Investigation of observational constraints on age graphic dark energy in a chameleon like mechanism”, **Presented as poster in 15th National conferences in University of Shahid Beheshti, Iran, 30-31 January (2013).**
12. **Kh. Saaidi**, A. Aghamohammadi, “Corresponding relation between $f(R)$ gravity and Holographic Dark Energy in the Horava Lifshitz Cosmology ”**Presented in 13th National conferences in University of Sharif, Iran 5-6 Jan (2011)**
13. **Kh.Saaidi**, A. Mohammadi, “Evolution of Brane Cosmology in the Presence of Dark Energy Candidates in the Bulk and Brane” **Presented in 13th National conferences in University of Sharif, Iran 5-6 Jan (2011)**
14. **K.Saaidi**, H. Shaeikahmadi, “Intracting NADE Model in Chameleon Brans-Dicke Cosmology” **Presented in 13th National conferences in University of Sharif, Iran 5-6 Jan (2011)**

15. **Kh. Saaidi**, “Weak Field limit of $f(R)$ gravity in large Scale” **presented in Twelfth Marcel Grossmann Meeting, 12-18 July 2009.**
16. **Khaled Saaidi**, Aram Vajdi, “Study of modified $1/R$ gravity in solar system” presented **in 13th Iranian conference on astronomy and cosmology, 25-29 January 2009.**
17. **Kh. Saaidi**, G. Ghafari, “Study of Entanglement Degree in Non- Hermitian Model with Negativity” **presented in 15th Iranian Conference on Optics and Photonics, University of Isfahan, 27-29 January 2009.**
18. **Kh. Saaidi**, “The solution of Dirac Equation for complex Potentials.” **Presented in Annual Physics Conferences of Iran, 23- 26 August 2004.**

Ph.D Thesis Supervision:

1. **Abolhassan Mohammadi** (2015-present)
2. **Mehraneh Tirandari** (2013- Present)
3. **Tayeb Golanbari**, (2011-2015), “**Study of the early Universe using scalar field model**”
4. **Haidar Sheikhhahmadi**, (2011-2015), “**Study of Casimir energy in scalar field model as a candidate for dark energy**”
5. **Worya Rabee**, (2010-2014), “**Scalar Tensor Theory and evolution of The Universe**”
6. **Ali Aghamohammadi**, (2009-2011) “**The Weak Field Approximation of $f(R)$ Theory of Gravity**”

M.S Thesis Supervision:

1. **Elnaz Khalilnasl** (2015-present) “ **ϕ CDM Cosmology in an interacting model of canonical scalar field with matter**” University of Kurdistan, Sanandaj, Iran
2. **Zahra Hosivandi** (2015-present) “**Stability non-canonical scalar field with an interacting of matter**” University of Kurdistan, Sanandaj, Iran
3. **Nadereh Nazavari** (2015-present) “**Intermediate inflation driven by DBI scalar field**” University of Kurdistan, Sanandaj, Iran
4. **Sohaila Ghorbani** (2013-2014) “**Refining inflation the universe using non-local scalar fields**” University of Kurdistan, Sanandaj, Iran
5. **Baharak Shafi** (2013-2014) “**Refining Inflation of the early universe in non-minimal coupling scalar field models**” University of Kurdistan, Sanandaj, Iran

6. **Zohdiah Ossoulian “Refining Φ CDM model in noncanonical scalar field”** University of Kurdistan, Sanandaj, Iran
7. **Zohreh Ghaderi (2013-2014) “ Post Newtonian approximation in chameleon scalar field model”** University of Kurdistan, Sanandaj, Iran
8. **Halaleh Haidari, (2013-2014)” ϕ CDM cosmology”** University of Kurdistan, Sanandaj, Iran
9. **Serosh Najafian, (2013-2014) “Study of stability scalar field model in cosmology”.** University of Kurdistan, Sanandaj, Iran
10. **Satar Nasri, (2012-2013) “Teleparallel Gravity”** University of Kurdistan, Sanandaj, Iran
11. **Davood Binandeh, (2012-2013) “Study of holographic dark energy”** University of Kurdistan, Sanandaj, Iran
12. **Mehri Mohammadi,(2011-2013) “ ”** University of Kurdistan, Sanandaj, Iran
13. **Haidar Sheikhamadi, (2010-2011), “Chameleon Cosmology”** University of Kurdistan, Sanandaj, Iran
14. **Abolhassan Mohammadi, (2009-2010) “ Brane Cosmology”,** University of Kurdistan, Sanandaj, Iran
15. **Sajad Zeiaee, (2009-2010) “Study of Nonsingular Cosmology”,** University of Kurdistan, Sanandaj, Iran
16. **Hossein Hossienkhani, (2010-2011) “Study of non-isotropic universe”,** University of Kurdistan, Sanandaj, Iran
17. **Aram Vajdi, (2008-2009) “Study of modified theories of gravity”,** University of Kurdistan, Sanandaj, Iran
18. **Ramin Bagheri, (2008-2009) “Study Of Quintessence Model for Dark Energy”,** University of Kurdistan, Sanandaj, Iran
19. **Bahareh Rouzbahani, (2007-2008) “Group velocity control in the lambda quantum system with spontaneously generated coherence (SGC) effect”,** University of Kurdistan, Sanandaj, Iran
20. **Soodabeh Dehnan Seidi, (2007-2008) “Group velocity control in the cascade quantum system with dark resonance effect”,** University of Kurdistan, Sanandaj, Iran
21. **Golaleh Gafari, (2007-2008) “Study of Quantum Optics Problem with Pseudo Hermitian Formalizem”,** University of Kurdistan, Sanandaj, Iran
22. **Abdolah Hosaini, (2004-2005) “Exact Solution of Schrodinger equation with Position dependent mass”,** University of Kurdistan, Sanandaj, Iran

Referee/Reviewer:

1. Quantum Information Processing Journal
2. The European Physical Journal C
3. Physical Review D
4. Astrophysics and Space Science
5. International Journal of Modern Physics

Teaching:

For B. Sc. Students:

1. General Physics I, II, III
2. Statistical Mechanics
3. Quantum Mechanics

For M.Sc. Students:

1. Advanced Quantum Mechanics
2. Electrodynamics
3. General relativity

For Ph.D. Students:

1. Quantum field Theory
2. General relativity

Permanent Address:

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