

# List of publications in peer reviewed Journals

## Bijan Saha

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### Journal Publications

- [1] Bijan Saha:  
*Spinors in cylindrically symmetric space-time*  
Universe **6**, 152 (2020)  
DOI:10.3390/universe6090152  
ArXiv: 2008.02062 [gr-qc] (2020)
- [2] Bijan Saha:  
*Non-minimally coupled nonlinear spinor field in FRW cosmology*  
Astrophysics and Space Science **365** 68 (2020)  
DOI: 10.1007/s10509-020-03780-y [Impact Factor: 2.263]  
ArXiv: 1908.05109 [gr-qc] (2019)
- [3] Bijan Saha:  
*Interacting self-consistent system of spinor and gravitational fields*  
International Journal of Modern Physics A **35** 2040047 (2020)  
DOI: 10.1142/S0217751X20400473 [Impact Factor: 1.699]
- [4] K.A. Bronnikov, Yu.P. Rybakov, and Bijan Saha:  
*Spinor fields in spherical symmetry: Einstein-Dirac and other space-times*  
The European Physical Journal Plus **135** 124 (2020)  
DOI 10.1140/epjp/s13360-020-00150-z [Impact Factor: 2.24]  
ArXiv: 1909.04789 [gr-qc] (2019)
- [5] Bijan Saha:  
*Non-minimally coupled nonlinear spinor field in Bianchi type-I cosmology*  
The European Physical Journal Plus **134** 491 (2019)  
DOI 10.1140/epjp/i2019-12859-7 [Impact Factor: 2.24]  
ArXiv: 1903.01781 [gr-qc] (2019)
- [6] Yuri P. Rybakov and Bijan Saha:  
*Surface Electromagnetic TM Waves along the Boundary between Two Nonlinear Anisotropic Dielectrics*  
Journal of Mechanics of Continua and Mathematical Sciences. Special Issue, 429 - 437 (2019)  
DOI 10.26782/jmcms.2019.03.00042

- [7] Bijan Saha:  
*Spinor fields in spherically symmetric space-time*  
 The European Physical Journal Plus **133** 461 (8 pages) (2018)  
 DOI [10.1140/epjp/i2018-12273-9](https://doi.org/10.1140/epjp/i2018-12273-9) [Impact Factor: 2.24]  
 ArXiv: 1806.09151 [gr-qc] (2018)
- [8] Bijan Saha:  
*Spinor field in Bianchi type-IX space-time*  
 Canadian Journal of Physics **96** 1074 - 1084 (2018)  
 DOI [10.1139/cjp-2017-0711](https://doi.org/10.1139/cjp-2017-0711) [Impact Factor: 0.964]  
 ArXiv: 1705.07773 [gr-qc] (2017)
- [9] Bijan Saha:  
*Spinor field nonlinearity and space-time geometry*  
*Нелинейность спинорного поля и геометрия пространства-времени*  
 Physics of Particles and Nuclei **49**(2), 146 - 212 (2018)  
 DOI: [10.1134/S1063779618020065](https://doi.org/10.1134/S1063779618020065) [Impact Factor: 0.619]
- [10] Bijan Saha:  
*Nonlinear spinor field in non-diagonal Bianchi type space-time*  
 EPJ Web of Conferences **173** 02018 (4 pages) (2018)  
 DOI [10.1051/epjconf/201817302018](https://doi.org/10.1051/epjconf/201817302018)
- [11] Bijan Saha:  
*Bianchi type-VIII spinor solutions*  
 The European Physical Journal Plus **132** 547 (12 pages) (2017)  
 DOI [10.1140/epjp/i2017-11830-0](https://doi.org/10.1140/epjp/i2017-11830-0) [Impact Factor: 2.24]
- [12] Bijan Saha and Victor S Rikhvitsky:  
*Nonlinear Spinor Fields in LRS Bianchi type-I space-time: Theory and observation*  
 Gravitation & Cosmology **23** 329 - 336 (2017)  
 DOI [10.1134/S0202289317040193](https://doi.org/10.1134/S0202289317040193) [Impact Factor: 0.716]  
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- [13] Bijan Saha:  
*Nonlinear Spinor field in isotropic space-time and dark energy models*  
 The European Physical Journal Plus **131** 242 - 17 (2016)  
 DOI [10.1140/epjp/i2016-16242-0](https://doi.org/10.1140/epjp/i2016-16242-0) [Impact Factor: 2.24]  
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- [14] Bijan Saha:  
*Nonlinear Spinor Fields in Bianchi type-VI space-time*  
 The European Physical Journal Plus **131** 170 - 18 (2016)  
 DOI [10.1140/epjp/i2016-16170-y](https://doi.org/10.1140/epjp/i2016-16170-y) [Impact Factor: 2.24]  
 ArXiv: 1507.03847v1 [gr-qc] (2015)

- [15] Bijan Saha:  
*Nonlinear Spinor Fields in Bianchi type-III space-time*  
 International Journal of Theoretical Physics **55** 2259 - 2274 (2016)  
 DOI [10.1007/s10773-015-2864-z](https://doi.org/10.1007/s10773-015-2864-z) [Impact Factor: 1.184]  
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- [16] Bijan Saha:  
*Spinor Field with Polynomial Nonlinearity in LRS Bianchi type-I space-time*  
 Canadian Journal of Physics **96** 116 - 121 (2016)  
 DOI [10.1139/cjp-2015-0574](https://doi.org/10.1139/cjp-2015-0574) [Impact Factor: 0.964]  
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- [17] Bijan Saha:  
*Nonlinear Spinor Fields in Bianchi type-V space-time*  
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 DOI [10.6122/CJP.20150713](https://doi.org/10.6122/CJP.20150713) [Impact Factor: 0.413]  
 ArXiv: 1602.05767 [gr-qc] (2016)
- [18] Bijan Saha:  
*Nonlinear Spinor Fields in Bianchi type-VI<sub>0</sub> space-time*  
 The European Physical Journal Plus **130** 208 - 13 (2015)  
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 ArXiv: 1504.03883v1 [gr-qc] (2015)
- [19] Bijan Saha:  
*Interacting Scalar and Electromagnetic Fields in  $f(R, T)$  Theory of Gravity*  
 International Journal of Theoretical Physics **54** 3776 - 3787 (2015)  
 DOI [10.1007/s10773-015-2615-1](https://doi.org/10.1007/s10773-015-2615-1) [Impact Factor: 1.184]  
 ArXiv: 1410.1738v1 [gr-qc]
- [20] Farook Rahman, Anirudh Pradhan, Nasr Ahmed, Saibal Ray, Bijan Saha and Moshir Rahman:  
*Fluid Sphere: Stability Problem and Dimensional Constraint*  
 International Journal of Modern Physics D **24**(6) 1550049 (14 pages) (2015)  
 DOI: [10.1142/S0218271815500492](https://doi.org/10.1142/S0218271815500492) [Impact Factor: 1.741]  
 1401.1402v2 [gr-qc]
- [21] Anirudh Pradhan and Bijan Saha:  
*Accelerating Dark Energy Models of the Universe in Anisotropic Bianchi Type Space-Times and Recent Observations*  
 Physics of Particles and Nuclei **46**(3) 310 - 346 (2015)  
 DOI: [10.1134/S1063779615030028](https://doi.org/10.1134/S1063779615030028) [Impact Factor: 0.619]
- [22] Bijan Saha:  
*Nonlinear Spinor Fields in Bianchi type-I spacetime: Problems and Possibilities*

- Astrophysics and Space Science **357**, 28 (2015)  
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- [23] Anirudh Pradhan, Bijan Saha and Victor Rikhvitsky:  
*Bianchi type-I transit cosmological models with time dependent gravitational and cosmological constants: reexamined*  
 Indian Journal of Physics **89** 503 - 513 (2015)  
 DOI: [10.1007/s12648-014-0612-5](https://doi.org/10.1007/s12648-014-0612-5) [Impact Factor: 2.24]  
 ArXiv: [1308.4842v1](https://arxiv.org/abs/1308.4842v1) [physics.gen-ph]
- [24] Bijan Saha, Victor Rikhvitsky and Anirudh Pradhan:  
*Bianchi type I cosmological models with time dependent gravitational and cosmological constants: an alternative approach*  
 Romanian Journal of Physics **60** 3 - 14 (2015) [Impact Factor: 0.924]
- [25] Anirudh Pradhan, Nasr Ahmed and Bijan Saha:  
*Reconstruction of modified  $f(R, T)$  with  $\Lambda(T)$  gravity in general class of Bianchi cosmological models*  
 Canadian Journal of Physics **93**(6) 654 - 662 (2015)  
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- [26] Mohd. Zeyauddin and Bijan Saha:  
*Bianchi type V bulk viscous cosmological models with particle creation in General Relativity*  
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 DOI: [10.1140/epjp/i2014-14177-0](https://doi.org/10.1140/epjp/i2014-14177-0) [Impact Factor: 2.24]  
 ArXiv: [1306.2168](https://arxiv.org/abs/1306.2168) [gr-qc]
- [27] Victor Rikhvitsky, Bijan Saha and Mihai Visinescu:  
*Magnetic Bianchi type II string cosmological model in loop quantum cosmology*  
 Astrophysics and Space Science **352** 255 - 261 (2014)  
 DOI: [10.1007/s10509-014-1890-2](https://doi.org/10.1007/s10509-014-1890-2) [Impact Factor: 2.263]  
 ArXiv: [1312.2385v1](https://arxiv.org/abs/1312.2385v1) [gr-qc]
- [28] Bijan Saha:  
*Isotropic and anisotropic dark energy models*  
 Physics of Particles and Nuclei **45** issue 2, 349 - 396 (2014)  
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- [29] Bijan Saha:  
*Nonlinear Spinor Fields in Bianchi type-I spacetime reexamined*  
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- [30] Bijan Saha:  
*Bianchi type-VI anisotropic dark energy model with varying EoS parameter*  
 International Journal of Theoretical Physics **52**, 3646 - 3657 (2013)  
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- [31] Bijan Saha:  
*Bianchi type-V dark energy model with varying EoS parameter*  
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- [32] Mohd. Zeyauddin and Bijan Saha:  
*Bianchi type-VI cosmological model: A scale-covariant study*  
 Astrophysics and Space Science **343** 445-450 (2013)  
 DOI: [10.1007/s10509-012-1228-x](https://doi.org/10.1007/s10509-012-1228-x) [Impact Factor: 2.263]  
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- [33] Bijan Saha:  
*Some remarks on Bianchi type-II, VIII and IX models*  
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- [34] Bijan Saha, H. Amirhashchi, and Anirudh Pradhan:  
*Two-Fluid Scenario for Dark Energy Models in an FRW Universe-Revisited*  
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- [35] Bijan Saha and Anil Kumar Yadav:  
*Dark energy model with variable  $q$  and  $\omega$  in LRS Bianchi-II space-time*  
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 ArXiv: [1110.4887v1](https://arxiv.org/abs/1110.4887v1) [physics.gen-phs]
- [36] Victor Rikhvitsky, Bijan Saha and Mihai Visinescu:  
*Bianchi type-I string cosmological model in the presence of a magnetic field: classical versus loop quantum cosmology approaches*  
 Astrophysics and Space Science **339** 371-377 (2012)  
 DOI: [10.1007/s10509-012-1000-2](https://doi.org/10.1007/s10509-012-1000-2) [Impact Factor: 2.263]  
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- [37] Anil Kumar Yadav and Bijan Saha:  
*LRS Bianchi-I Anisotropic Cosmological Model with Dominance of Dark Energy*

- Astrophysics and Space Science **337** 759 - 765 (2012)  
 DOI: [10.1007/s10509-011-0861-0](https://doi.org/10.1007/s10509-011-0861-0) [Impact Factor: 2.263]  
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- [38] Bijan Saha:  
*Nonlinear Spinor Fields and its role in Cosmology*  
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- [39] Bijan Saha:  
*Nonlinear spinor field in Bianchi type-II spacetime*  
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- [40] Anirudh Pradhan, H. Amirhashchi, and Bijan Saha:  
*An interacting and non-interacting two-fluid scenario for dark energy in FRW universe with constant deceleration parameter*  
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*An interacting two-fluid scenario for dark energy in FRW Universe*  
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- [42] Bijan Saha:  
*Bianchi type-II cosmological model: some remarks*  
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- [43] Anirudh Pradhan, H. Amirhashchi, and Bijan Saha:  
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- [44] H. Amirhashchi, Anirudh Pradhan, and Bijan Saha:  
*Variable equation of state for Bianchi type-VI<sub>0</sub> dark energy models*  
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- [45] Yu.P. Rybakov, G.N. Shikin, Yu.A. Popov and Bijan Saha:  
*Scalar field in cosmology: Potential for isotropization and inflation*

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- [46] Yu.P. Rybakov, G.N. Shikin, Yu.A. Popov and Bijan Saha:  
*Electromagnetic field with induced massive term: Case with scalar field*  
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- [48] Bijan Saha and Mihai Visinescu:  
*Bianchi type-VI model with cosmic strings in the presence of a magnetic field*  
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- [49] Bijan Saha:  
*Spinor Field with Induced Nonlinearity in Bianchi VI Cosmology: Exact and Numerical Solutions*  
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- [50] Mihai Visinescu and Bijan Saha:  
*Cosmological string model in the presence of a magnetic field: Spinor approach and quantum loop effects*  
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- [51] Bijan Saha and Mihai Visinescu:  
*Bianchi type-I model with cosmic string in the presence of a magnetic field: spinor description*  
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*Spinor model of a perfect fluid: examples*  
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*Bianchi type-I string cosmological model in the presence of a magnetic flux: exact and qualitative solutions*  
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*Interacting spinor and scalar fields in Bianchi type-I Universe filled with viscous fluid: exact and numerical solutions*  
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- [56] Bijan Saha:  
*Early inflation, isotropization and late-time acceleration of a Bianchi type-I universe*  
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