

## FULL LIST OF PUBLICATIONS : As on August 18, 2021

- 117.** *Majorana neutrinos, Exceptional Jordan algebra, and mass ratios for charged fermions;* Vivan Bhatt, Rajrupa Mondal, Vatsalya Vaibhav and Tejinder P. Singh, arXiv:2108.05787 [hep-ph] (2021) submitted for publication.
- 116.** *Left-Right symmetric fermions and sterile neutrinos from complex split biquaternions and bioctonions,* Vatsalya Vaibhav and Tejinder P. Singh, arXiv:2108.01858 (hep-ph) (2021) submitted for publication.
- 115.** *The characteristic equation of the exceptional Jordan algebra: its eigenvalues, and their relation with mass ratios of quarks and leptons.* Tejinder P. Singh, submitted for publication (2020)  
<https://www.preprints.org/manuscript/202101.0474/v4>  
doi: 10.20944/preprints202101.0474.v4
- 114.** *Why does the Kerr-Newman black hole have the same gyromagnetic ratio as the electron?* M S Meghraj, Abhishek Pandey, and Tejinder P. Singh; arXiv:2006.05392 [gr-qc] submitted for publication.
- 113.** *Proposal for a new quantum theory of gravity IV: black hole entropy from non-commutative geometry and spontaneous localisation;* Palemkota Maithresh and Tejinder P. Singh, [arXiv: 1909.02434 (gr-qc)] submitted for publication

### A. In Refereed Journals:

- 112.** *Quantum theory without classical time: octonions, and a theoretical derivation of the fine structure constant  $1/137$*  Tejinder P. Singh, accepted for publication in Int. J. Mod. Phys. D (2021)  
<https://doi.org/10.1142/S0218271821420104>  
<https://www.preprints.org/manuscript/202105.0370/v1> doi: 10.20944/preprints202105.0370.v1  
*This essay received an honourable mention in the Gravity Research Foundation essay contest 2021.*
- 111.** *Spontaneous quantum gravity;* Tejinder P. Singh, arXiv:1912.03266 Journal of High Energy Physics, Gravitation and Cosmology 7, 880-905 (2021) doi: 10.4236/jhepgc2021.73050
- 110.** *Trace dynamics, and a ground state in spontaneous quantum gravity,* Abhinash Kumar Roy, Anmol Sahu and Tejinder P. Singh, Modern Physics Letters A 36, 2150019 (2021).  
<https://www.worldscientific.com/doi/epdf/10.1142/S021773232150019X>  
<https://www.tifr.res.in/~tarsingh/qginitialstate.pdf> arXiv:2104.14344
- 109.** *Quantum gravity, holography, and minimal length;* Tejinder P. Singh, [arXiv:1910.06350 [gr-qc]] Pramana - Journal of Physics 95, 40 (2021) <https://doi.org/10.1007/s12043-020-02052-2>
- 108.** *Trace dynamics and division algebras: towards quantum gravity and unification,* Tejinder P. Singh, arXiv:2009.05574 [hep-th] (2020) Zeitschrift fur Naturforschung A 76 (2021) 131  
DOI: <https://doi.org/10.1515/zna-2020-0255>
- 107.** *Octonions, trace dynamics and non-commutative geometry: a case for unification in spontaneous quantum gravity,* Tejinder P. Singh arXiv:2006.16274 (2020) Zeitschrift fur Naturforschung A 75 (2020) 1051 DOI: <https://doi.org/10.1515/zna-2020-0196>

**106.** *A basic definition of spin in the new matrix dynamics*, Tejinder P. Singh, **Zeitschrift fur Naturforschung A 75** (2020) 963 DOI: <https://doi.org/10.1515/zna-2020-0183> (2020) arXiv:2006.16274v1 DOI: <https://doi.org/10.1515/zna-2020-0183>

**105.** *Nature does not play Dice on the Planck scale*, Tejinder P. Singh, arXiv:2005.06427 **Int. J. Mod. Phys. D 29** (2020) 2043012 <https://doi.org/10.1142/S0218271820430129>

**104.** *From quantum foundations to spontaneous quantum gravity: an overview of the new theory*; Tejinder P. Singh, (2020) arXiv:1909.06340 [quant-ph] **Zeitschrift fur Naturforschung A 75**, 833 (2020)

DOI: [10.1515/zna-2020-0073](https://doi.org/10.1515/zna-2020-0073)

**103.** *Dark energy as a large scale quantum gravitational phenomenon*; Tejinder P. Singh, arXiv:1911.02955 [gr-qc] **Mod. Phys. Lett. 35** (2020) 2050195 [Editor's Pick]

[10.1142/S0217732320501953](https://doi.org/10.1142/S0217732320501953)

**102.** *Path integrals, spontaneous localisation, and the classical limit*; Bhavya Bhatt, Manish, Raj Patil, Ruchira Mishra, Shlok Nahar, and Tejinder P. Singh, [arXiv:1808.04178] **Zeitschrift fur Naturforschung A 75** (2020) 131 DOI: [10.1515/zna-2019-0251](https://doi.org/10.1515/zna-2019-0251)

**101.** *Proposal for a new quantum theory of gravity III: equations for quantum gravity, and the origin of spontaneous localisation*; Palemkota Maithresh and Tejinder P. Singh, [arXiv:1908.04309 (gr-qc)] **Zeitschrift fur Naturforschung A 75** (2020) 143 DOI: [10.1515/zna-2019-0267](https://doi.org/10.1515/zna-2019-0267)

**100.** *Proposal for a new quantum theory of gravity II: spectral equation of state for the atom of space-time-matter*; Tejinder P. Singh [arXiv:1906.08248] **Zeitschrift fur Naturforschung A 74** (2019) 989 [10.1515/zna-2019-0211](https://doi.org/10.1515/zna-2019-0211)

**99.** *Quantum gravity as an emergent phenomenon*, Shounak De, Tejinder P. Singh and Abhinav Varma, arXiv:1903.11066 [gr-qc] **Int. J. Mod. Phys. 28** (2019) 1944003 <https://doi.org/10.1142/S0218271819440036>

**98.** *Proposal for a new quantum theory of gravity*; Tejinder P. Singh [arXiv:1903.05402] (2019), **Zeitschrift fur Naturforschung A 74** (2019) 617 DOI: <https://doi.org/10.1515/zna-2019-0079>

**97.** *Outline for a quantum theory of gravity*, Tejinder P. Singh, arXiv:1901.05953 (2019) **Zeitschrift fur Naturforschung A 74** (2019) 383, DOI: [10.1515/zna-2019-0027](https://doi.org/10.1515/zna-2019-0027)

**96.** *Testing spontaneous collapse through bulk heating experiments: estimate of the background noise*; Ruchira Mishra, Andrea Vinante and T. P. Singh [arXiv:1807.03067] **Phys. Rev. A 98**, 052121 (2018)

**95.** *Space-time from collapse of the wave-function*; T. P. Singh, [arXiv:1809.03441] **Zeitschrift für Naturforschung A 74** (2019) 147 DOI: <https://doi.org/10.1515/zna-2018-0477>

**94.** *Non-relativistic limit of Einstein-Cartan-Dirac equations*, Swanand Khanapurkar, Arnab Pradhan, Vedant Dhruv and T. P. Singh [arXiv:1804.04434] **Phys. Rev. D 98**, 104027 (2018)

**93.** *Testing the limits of quantum mechanics*, T. P. Singh, arXiv:1810.00167 [quant-ph] **Current Science 115** (2018) 1641

92. *A duality between curvature and torsion*, Swanand Khanapurkar and T. P. Singh [[arXiv:1804.00167](#)], **Int. J. Mod. Phys. 27** (2018) 1847008
91. *Space and time as a consequence of GRW quantum jumps*; T. P. Singh, [[arXiv:1806.01297](#)] **Zeitschrift für Naturforschung A73** (2018) 923 (Rapid Communication)
90. *Einstein-Cartan-Dirac equations in the Newman-Penrose formalism*, Swanand Khanapurkar, Abhinav Varma, Nehal Mittal, Navya Gupta and T. P. Singh [[arXiv:1804.11334](#)] **Phys. Rev. D98** (2018) 064406
89. *Quantum theory and the structure of space-time*; T. P. Singh, [arXiv:1707.01012](#) [[quant-ph](#)] **Zeitschrift für Naturforschung A 18**, 733 (2018)
88. *A new length scale, and modified Einstein-Cartan-Dirac equations for a point mass*, T. P. Singh [[arXiv:1705.05330](#)] **Int. J. Mod. Phys. D 27** (2018) 1850077
87. *A new length scale for quantum gravity*, T. P. Singh [[arXiv:1704.00747](#)] [[2017](#)] **Int. J. Mod. Phys. D 26** (2017) 1743015
86. *Constraints on modified gravity from white dwarfs*, Srimanta Banerjee, Swapnil Shankar and T. P. Singh, [[arXiv:1705.01048](#)] [[2017](#)] **JCAP** 1710 (2017) 004
85. *Constraints on fourth order gravity from binary pulsars and gravitational waves*; Shreya Banerjee, Sayantani Bera and T. P. Singh; [arXiv:1601.02357](#) [[2016](#)] **Phys. Rev. D 96** (2017) 084015
84. *Signatures of spontaneous collapse-dynamics-modified single-field inflation*, Shreya Banerjee, Suratna Das, Sravan Kumar and T. P. Singh, **Phys. Rev. D 95** (2017) 103518 [[arXiv:1612.09131](#)]
83. *Space-time fluctuations and a stochastic Schrodinger-Newtonian equation*; Sayantani Bera, Priyanka Giri and T. P. Singh, **Foundations of Physics**, 47 (2017) 897 [[arXiv:1608.02102](#)]
82. *Quantum non-locality, and the end of classical space-time*; Shreya Banerjee, Sayantani Bera and T. P. Singh, **Int. J. Mod. Phys. 25** (2016) 1644005 [[arXiv:1605.06022](#)]
81. *Quantum discord as a tool for comparing collapse models and decoherence*; Shreya Banerjee, Sayantani Bera and T. P. Singh, **Phys. Lett. A 380** (2016) 3778 [[arXiv:1604.05834](#)]
80. *General relativity, torsion, and quantum theory*; T. P. Singh, **Current Science 109** (2015) 2258 [[arXiv:1512.06982](#)].
79. *Cosmological constant, quantum measurement, and the problem of time*; Shreya Banerjee, Sayantani Bera and T. P. Singh; **Int. J. Mod. Phys. D 24** (2015) 1544011 [[arXiv:1505.03805](#)]
78. *A stochastic modification of the Schrodinger-Newton equation*; Sayantani Bera, Ravi Mohan and T. P. Singh; **Phys. Rev. D 92** (2015) 025054 [[arXiv:1504.05892](#)]
77. *Cosmic acceleration in a model of fourth order gravity*; Shreya Banerjee, Nilesh Jayswal and T. P. Singh; **Phys. Rev. D 92** (2015) 084026 [[arXiv:1504.01867](#)]

76. *A proposal for the experimental detection of CSL induced random walk*; Sayantani Bera, Bhawna Motwani, T. P. Singh and Hendrik Ulbricht; [arXiv:1409.8204] **Scientific Reports** 5, 7664 (2015)
75. *A comparison between models of gravity induced decoherence*; Sayantani Bera, Sandro Donadi, Kinjalk Lochan and T. P. Singh, **Foundations of Physics** 45 (2015) 1537 [arXiv:1408.1194]
74. *A possible correspondence between Ricci identities and Dirac equations in the Newman-Penrose formalism: towards an understanding of gravity induced collapse of the wave-function?*, Anushrut Sharma and Tejinder P. Singh, **Gen. Rel. Grav.** 46:1821 (2014) arXiv:1403.2231
73. *How the quantum emerges from gravity?* Anushrut Sharma and T. P. Singh, arXiv: 1405.3915 **Int. J. Mod. Phys.** 23, 1442007 (2014)
72. *Classicalization of inflationary perturbations by collapse models in the light of BICEP2*, Suratna Das, Satyabrata Sahu, Shreya Banerjee and T. P. Singh, arXiv:1404.5740, **Phys. Rev. D** 90, 043503 (2014)
71. *Thermodynamics and Lemaitre-Tolman-Bondi voids*, Priti Mishra and T. P. Singh, arXiv:1406.0563, **Phys. Rev. D** 89, 123007 (2014)
70. *Fourth order gravity, scalar-tensor-vector gravity and galaxy rotation curves*, Priti Mishra and Tejinder P. Singh, **Phys. Rev. D** 88, 104036 (2013) [arXiv:1108.2375]
69. *Quantum to classical transition of inflationary perturbations – continuous spontaneous localization as a possible mechanism*; Suratna Das, Kinjalk Lochan, S. Sahu and Tejinder P. Singh, **Phys. Rev. D** 88 (2013) 085020 [arXiv: 1304.5094]
68. *Models of wave-function collapse, underlying theories, and experimental tests*; Angelo Bassi, Kinjalk Lochan, Seema Satin, Tejinder P. Singh and Hendrik Ulbricht [arXiv: 1204.4325] **Rev. Mod. Phys.** 85 (2013) 471
67. *Redshift drift as a test for discriminating between different cosmological models*; Priti Mishra, Marie-Noelle Celerier and Tejinder P. Singh; [arXiv:1206.6026] **Phys. Rev. D** 86 (2012) 083520
66. *Statistical thermodynamics for a noncommutative special relativity: emergence of a generalized quantum dynamics*; Kinjalk Lochan, Seema Satin and T. P. Singh; [arxiv: 1203.6518] **Found. Phys.** 42 (2012) 1556
65. *Modified gravity as a common cause for cosmic acceleration and flat galaxy rotation curves*; Priti Mishra and T. P. Singh, **Int. J. Mod. Phys.** 21 , 124202 (2012) [arXiv: 1205.3088]
64. *Trace dynamics and a non-commutative special relativity*; Kinjalk Lochan and T. P. Singh; [arXiv:1109.0300 [gr-qc]] **Phys. Lett.** A375 (2011) 3747

63. *Nonlinear quantum mechanics, the superposition principle, and the quantum measurement problem*; T. P. Singh and Kinjalk Lochan; [arxiv:0912.2845 [quant-ph]] **Pramana J. Phys.** 76, 67 (2011)
62. *The connection between 'the emergence of time from quantum gravity' and 'the dynamical collapse of the wave-function in quantum mechanics'*; T. P. Singh; [arXiv:1005.2682 [quant-ph]] **Int. J. Mod. Phys.** D19, 2265 (2010)
61. *Quantum theory, noncommutative gravity, and the cosmological constant problem*, T. P. Singh; **Adv. in Astronomy** 2009 (2009) 632064 [arXiv:0901.0978 [gr-qc]]
60. *Cosmic inhomogeneities and the average cosmological dynamics*, Aseem Paranjape and T. P. Singh; **Phys. Rev. Lett.** 101, 181101 (2008). [arXiv:0806.3497 [astro-ph]].
59. *Noncommutative gravity, a 'no strings attached' quantum classical duality, and the cosmological constant puzzle*, T. P. Singh; **Gen. Rel. Grav.** 40, 2037 (2008); also published in **Int. J. Mod. Phys.** D17, 2593 (2009). [arXiv:0805.2124 [gr-qc]]. [This essay received the second prize in the Gravity Research Foundation Essay Competition 2008].
58. *Classical and quantum gravitational collapse in d-dim AdS spacetime II: Quantum states and Hawking radiation*; Cenalo Vaz, Rakesh Tibrewala and T. P. Singh, **Phys. Rev.** D78, 024019 (2008). [arXiv:0805.0519 [gr-qc]].
57. *Structure Formation, Back Reaction, and Weak Gravitational Fields*; Aseem Paranjape and T. P. Singh; **JCAP** 0803, 023 (2008) [arXiv:0801:1546].
56. *Classical and quantum gravitational collapse in d-dim AdS spacetime I: Classical Solutions*; Rakesh Tibrewala, Sashideep Gutti, T. P. Singh and Cenalo Vaz, **Phys. Rev.** D77, 064012 (2008). [arXiv:0712.1413[gr-qc]].
55. *Mass spectrum and statistical entropy of the BTZ black hole from canonical quantum gravity*; Cenalo Vaz, Sashideep Gutti, Claus Kiefer, T. P. Singh and L. C. R. Wijewardhana; **Phys. Rev.** D77, 064021 (2008). [arXiv:0712.1998 [gr-qc]].
54. *The inevitable nonlinearity of quantum gravity falsifies the many-worlds interpretation of quantum mechanics*, T. P. Singh; **Int. Jour. Mod. Phys.** D17, 611 (2008).[arXiv:0705.2357 [gr-qc]]; [This essay received an honorable mention in the Gravity Research Foundation Essay Competition (2007)].
53. *Explicit Cosmological Coarse Graining via Spatial Averaging*, Aseem Paranjape and T.P. Singh; **Gen. Rel. Grav.** 40, 139 (2008). [arXiv:astro-ph/0609481].
52. *Quantum gravitational collapse and Hawking Radiation in 2+1 dimensions*; Sashideep Gutti, Claus Kiefer, T. P. Singh and Cenalo Vaz; **Phys. Rev.** D76, 124021 (2007). [arXiv:0710.2164 [gr-qc]]
51. *Particle creation in (2+1) circular dust collapse*, Sashideep Gutti and T. P. Singh; **Phys. Rev.** D76, 064026 (2007) . [arXiv:gr-qc/0703142]

50. *The Spatial Averaging Limit of Covariant Macroscopic Gravity – Scalar Corrections to the Cosmological Equations*; Aseem Paranjape and T.P. Singh; **Phys. Rev. D**76, 044006 (2007) . [arXiv:gr-qc/0703106]
49. *Hawking radiation from the quantum Lemaitre-Tolman-Bondi model*, Claus Kiefer, Jakob Muller-Hill, T.P. Singh and Cenalo Vaz; **Phys. Rev. D**75, 124010 (2007). [arXiv:gr-qc/0703008]
48. *String theory, quantum mechanics and non-commutative geometry: a new perspective on the gravitational dynamics of D0-branes*; T. P. Singh; **Intl. Jour. Mod. Phys. D**15, 2153 (2006). [arXiv:hep-th/0605112] [*This essay received an honorable mention in the Gravity Research Foundation Essay Competition (2006)*].
47. *Quantum mechanics without spacetime: A Case for noncommutative geometry*, T.P. Singh; **Bulg. Jour. Phys.** 33, 217 (2006). [arXiv:gr-qc/0510042]
46. *The possibility of cosmic acceleration via spatial averaging in LTB models*; Aseem Paranjape and T. P. Singh; **Class. Quant. Grav.** 23, 6955 (2006). [arXiv:gr-qc/0605195].
45. *The quantum gravitational black hole is neither black nor white*; T. P. Singh and Cenalo Vaz; **Intl. Jour. Mod. Phys. D**13, 2369 (2004). [arXiv:gr-qc/0405087] [*This essay received the fourth prize in the Gravity Research Foundation Essay Competition (2004)*].
44. *Exact quantum state of collapse and Hawking radiation*, Cenalo Vaz, Louis Witten and T. P. Singh, **Phys. Rev. D**69 (2004) 104029. [arXiv:gr-qc/0306045]
43. *A note on the thermodynamics of gravitational radiation*, T. Padmanabhan and T. P. Singh **Class. Quant. Grav.** 20 (2003) 4419. [arXiv:gr-qc/0305030]
42. *Quantum general relativity and Hawking radiation*; C. Vaz, C. Kiefer, T. P. Singh and L. Witten, **Phys. Rev. D**67 (2003) 024014. [arXiv:gr-qc/0208083]
41. *Quantum mechanics without spacetime II: noncommutative geometry and the free point-particle*; T. P. Singh, **Gen. Rel. Grav.** 35 (2003) 869. [arXiv:gr-qc/0205056]
40. *Toward a quantization of null dust collapse*; Cenalo Vaz, Louis Witten and T. P. Singh, **Phys. Rev. D**65 (2002) 104016. [arXiv:gr-qc/0112024]
39. *Naked singularities and quantum gravity*; T. Harada, H. Iguchi, K. Nakao, T. P. Singh, T. Tanaka and C. Vaz, **Phys. Rev. D**64 (2001) 041501 [Rapid Communication]. [arXiv:gr-qc/0010101]
38. *Analytic derivation of the map of null rays passing near a naked singularity*; T. Tanaka and T. P. Singh, **Phys. Rev. D**63 (2001) 124021.[arXiv:gr-qc/0010110]
37. *Towards a midisuperspace quantization of Lemaitre-Tolman-Bondi collapse models*; Cenalo Vaz, Louis Witten and T.P. Singh, **Phys. Rev. D**63 (2001) 104020. [arXiv:gr-qc/0012053]
36. *Divergence of the quantum stress tensor on the Cauchy horizon in 2-d dust collapse*; Sukratu Barve, T.P. Singh and Cenalo Vaz; **Phys. Rev. D**62 (2000) 084021. [arXiv:gr-qc/0001085]

35. *Radiation flux and spectrum in the Vaidya collapse model*, T. P. Singh and Cenalo Vaz; **Phys. Lett.** B481 (2000) 74. [arXiv:gr-qc/0002018]
34. *Quantum radiation from black holes and naked singularities in spherical dust collapse*, T. P. Singh and Cenalo Vaz; **Phys. Rev.** D61 (2000) 124005. [arXiv:gr-qc/9912063]
33. *Spherical gravitational collapse: tangential pressure and related equations of state*, S. Barve, T. P. Singh and Louis Witten; **General Relativity and Gravitation** 32 (2000) 697. [arXiv:gr-qc/9901080]
32. *A simple derivation of the naked singularity in spherical dust collapse*, S. Barve, T. P. Singh, Cenalo Vaz and Louis Witten; **Classical and Quantum Gravity** 16, 1727 (1999). [arXiv:gr-qc/9901054]
31. *A characterisation of the central shell-focusing singularity in spherical gravitational collapse*; T. P. Singh, **Classical and Quantum Gravity** 16, 3307 (1999). [arXiv:gr-qc/9808003]
30. *The quantum stress tensor for self-similar dust collapse*; S. Barve, T. P. Singh, Cenalo Vaz and Louis Witten; **Phys. Rev.** D58, 104018 (1998). [arXiv:gr-qc/9805095].
29. *Gamma-ray bursts and quantum cosmic censorship*, T. P. Singh, **General Relativity and Gravitation** 30, 1563 (1998). (*This essay received the 3rd prize from the Gravity Research Foundation, USA for the year 1998*). [arXiv:gr-qc/9805062]
28. *Particle creation in the marginally bound self-similar collapse of inhomogeneous dust*; S. Barve, T. P. Singh, Cenalo Vaz and Louis Witten, **Nuclear Physics B** 532, 361 (1998). [arXiv:gr-qc/9802035]
27. *Comment on stability of naked singularities in spherically symmetric dust collapse*", T. P. Singh, **Phys. Rev.** D.58, 108502 (1998).
26. *Null geodesic expansion in spherical gravitational collapse*, T. P. Singh, **Phys. Rev.** D 58, 024004 (1998). [arXiv:gr-qc/9711049]
25. *Are naked singularities forbidden by the second law of thermodynamics?* S. Barve and T. P. Singh, **Modern Physics Letters A**12, 2415 (1997). (*This essay received an Honorable Mention from the Gravity Research Foundation for the year 1997.*) [arXiv:gr-qc/9705057]
24. *Spherical gravitational collapse with tangential pressure*; T. P. Singh and Louis Witten, **Classical and Quantum Gravity** 14, 3489 (1997). [arXiv:gr-qc/9701002]
23. *Cosmic censorship and the role of pressure in gravitational collapse*; F.I. Cooperstock, Sanjay Jhingan, P. S. Joshi and T. P. Singh, **Classical and Quantum Gravity** 14, 2195 (1997). [arXiv:gr-qc/9609051]
22. *The final fate of spherical inhomogeneous dust collapse II*; Sanjay Jhingan, P. S. Joshi and T. P. Singh, **Classical and Quantum Gravity** 13, 3057 (1996). [arXiv:gr-qc/9604046]

21. *The final fate of spherical inhomogeneous dust collapse*; T. P. Singh and P. S. Joshi, **Classical and Quantum Gravity** 13, 559 (1996). [arXiv:gr-qc/9409062]
20. *Reply to Unnikrishnan on naked singularities*; P. S. Joshi and T. P. Singh, **General Relativity and Gravitation** 27, 921 (1995).
19. *Reply to the paper "On naked naked singularities in spherically symmetric gravitational collapse"*, P. S. Joshi and T. P. Singh, **Bull. Astron. Soc. India** 23, 41 (1995).
18. *Role of initial data in gravitational collapse of inhomogeneous dust*; P. S. Joshi and T. P. Singh, **Phys. Rev. D** 51, 6778 (1995). [arXiv:gr-qc/9405036]
17. *The quasi-linear evolution of the density field in models of gravitational instability*; F. Bernardeau, T. P. Singh, B. Banerjee and S. M. Chitre, **Mon. Not. Roy. Astr. Soc.** 269, 947 (1994). [arXiv:astro-ph/9311055]
16. *On the relation between causality and topology in the semiclassical universe*; M. Seriu and T. P. Singh, **Phys. Rev. D** 50, 6165 (1994).
15. *Quantum gravity and non-unitarity in black hole evaporation*; C. Kiefer, R. Muller and T. P. Singh, **Modern Physics Letters** 9, 2661 (1994). [arXiv:gr-qc/9308024]
14. *A comparison of various approaches to the back reaction problem*; T. Padmanabhan and T. P. Singh, **Annals of Physics** 221, 217 (1993).
13. *A comparison between semiclassical gravity and semiclassical electrodynamics*; Claus Kiefer, T. Padmanabhan and T. P. Singh, **Classical and Quantum Gravity** 8, L185 (1991).
12. *Quantum gravitational corrections to the functional Schrodinger equation*; Claus Kiefer and T. P. Singh, **Phys. Rev. D** 44, 1067 (1991).
11. *Gravity induced corrections to quantum mechanical wave functions*; T. P. Singh, **Classical and Quantum Gravity** 7, L149 (1990).
10. *On the semiclassical limit of the Wheeler-DeWitt equation*; T. Padmanabhan and T. P. Singh, **Classical and Quantum Gravity** 7, 411 (1990).
9. *Notes on semiclassical gravity*; T. P. Singh and T. Padmanabhan, **Annals of Physics** 196, 296 (1989).
8. *Making inflation work: damping of density perturbations due to Planck energy cut-off*; T. Padmanabhan, T. R. Seshadri and T. P. Singh, **Phys. Rev. D** 39, 2100 (1989).
7. *On the thermodynamics of deSitter and quasi-deSitter spacetime*; M. D. Pollock and T. P. Singh, **Classical and Quantum Gravity** 6, 901 (1989).
6. *Response of an accelerated detector in coherent states and the semiclassical limit*; T. Padmanabhan and T. P. Singh, **Phys. Rev. D** 38, 2457 (1988).
5. *On Feynman's formula for the electromagnetic field of an arbitrarily moving charge*; A. Janah, T. Padmanabhan and T. P. Singh, **American Journal of Physics** 56, 1036 (1988).



4. *An attempt to explain the smallness of the cosmological constant*; T. P. Singh and T. Padmanabhan, **Int. Jour. of Mod. Phys. A3**, 1593 (1988).

3. *Response of an accelerated detector coupled to the stress-energy tensor*, T. Padmanabhan and T. P. Singh, **Classical and Quantum Gravity** 4, 1397 (1987). (*This essay received an Honorable Mention from the Gravity Research Foundation for the year 1987*).

2. *Semiclassical cosmology with a scalar field*; T. P. Singh and T. Padmanabhan, **Phys. Rev. D** 35, 2993 (1987).

1. *Uncertainty principle and the quantum fluctuations of Schwarzschild light cones*; T. Padmanabhan, T. R. Seshadri and T. P. Singh, **Int. Jour. of Mod. Phys. A1**, 491 (1986).

## **B. In Books**

3. *Wave function collapse, non-locality and space-time structure*, T. P. Singh [**arXiv:1701.09132**] in 'Collapse of the wave function' Ed. Shan Gao (Cambridge University Press) (2018)

2. *Classical and quantum: a conflict of interest*, T. P. Singh, in 'Gravity and the quantum' [Essays in honour of Thanu Padmanabhan on the occasion of his sixtieth birthday] Eds. Jasjeet Singh Bagla and Sunu Engineer (Springer, 2017) **Fundam. Theor. Phys.** 187 (2017) 411 [**arXiv:1703.03443**]

1. *The problem of time and the problem of quantum measurement*; Tejinder P. Singh, in 'Re-thinking time at the interface of physics and philosophy' (2015) Eds. Thomas Filk and Albrecht von Muller (Springer International Publishing Switzerland) [**arXiv:1210.8110**]

## **C. In Conference Proceedings**

11. *Possible role of gravity in the collapse of the wave-function*; T. P. Singh, in Proceedings of DICE 2014, Castiglioncello, Italy, September, 2014. **J. Phys. Conf. Series** 626 (2015) 012009 [**arXiv:1503.1040**]

10. *The effect of inhomogeneities on the average cosmological dynamics*; T. P. Singh, in Proceedings of the Conference on Two Cosmological Models, Universidad Iberoamericana, Mexico City, 2010; **arXiv: 1105.3450 [astro-ph.CO]**

9. *Quantum Measurement and Quantum Gravity : Many-worlds or collapse of the wave-function?*; T. P. Singh [**arXiv:0711.3773 [gr-qc]**](2007), published in Vignettes in gravitation and cosmology, Eds. T. R. Seshadri and L. Sriramkumar (World Scientific), and in Proceedings of DICE2008, Castigniocello, Italy, September, 2008, Journal of Physics Conference Series C 174 (2009) 012024.

8. *Quantum mechanics without spacetime: A noncommutative Hamilton-Jacobi equation*; T. P. Singh, [**arXiv:gr-qc/0406054**]; in Proc. IAGRG Conference, Jaipur, 2005.

7. *Quantum mechanics without spacetime: a case for noncommutative geometry?*; T. P. Singh [**arXiv:quant-ph/0112119**]; plenary talk given at Workshop on Mach's principle, IIT

Kharagpur, Feb. 2002; in *Mach's Principle and the Origin of Inertia*, Eds. M. Sachs and A. R. Roy (Apeiron, Montreal).

6. *Comparing quantum black holes and naked singularities*; T. P. Singh, [arXiv:gr-qc/0012087]; plenary lecture given at JGRG10, Osaka (Sep. 2000), in *General Relativity and Gravitation* Ed. M. Sasaki, J. Yokoyama, T. Nakamura and K. Tomita; Osaka University.

5. *Gravitational collapse, black holes and naked singularities*; T. P. Singh, [arXiv:9805066]; plenary lecture given at the Workshop on Black Holes, Bangalore, India (Dec. 1997), in *Journal of Astronomy and Astrophysics* 20, 221 (1999).

4. *Singularities and cosmic censorship*; T. P. Singh, *Journal of Astronomy and Astrophysics* 18, 335 (1997).

3. *A report on the workshop on quantum gravity*; ICGC-3, Pune, India. T. P. Singh and J. J. Halliwell, in *Gravitation and Cosmology*, Eds. S. V. Dhurandhar and T. Padmanabhan, Kluwer, Dordrecht (1997).

2. *Gravitational collapse and cosmic censorship*; T. P. Singh, Plenary talk given at the IAGRG Conference, Chennai (1996). in *Classical and quantum aspects of gravitation and cosmology*, Eds. G. Date and B. R. Iyer (1996) [arXiv:gr-qc/9606016].

1. *Semiclassical Gravity*; Plenary talk given at the 2nd International Conference on Gravitation and Cosmology, Ahmedabad, India (1991). In *Advances in Gravitation and Cosmology*, Eds. B. R. Iyer, A. R. Prasanna, R. K. Varma and C. V. Vishveshwara, Wiley Eastern (New Delhi, 1993).

#### **D. Book Review**

1. *Quantum Gravity* by C. Kiefer (Oxford University Press), Reviewed by T. P. Singh in *Gen. Rel. Grav.* 38, 183 (2006).

#### **E. Book**

B. S. Sathyaprakash and T. P. Singh (Editors), *Vishwa Mimansa: An Interpretative Exposition of the Universe*. Proceedings of the 7th International Conference on Gravitation and Cosmology 14–19 December 2011, Goa, India; *J. Phys. Conf. Series* Vol. 484 (2014)

#### **F. Special Issue**

100 Years of General Relativity; *Current Science*, Vol. 109 (2015) Guest Editors: Banibrata Mukhopadhyay and T. P. Singh

#### **G. Popular Science Articles/Videos/Blog**

16. YouTube Video Lecture *Towards unification of the four fundamental forces (2020)*  
<https://youtu.be/uxdvergYNrg>

Tejinder P. Singh

15. YouTube Video *Aikyons, octonions and unification (2020)*  
<https://youtu.be/RmrkmGVUzo4>

Tejinder P. Singh

14. The pollen and the electron: a study in randomness, Priyanka Giri and T. P. Singh,  
<https://fqxi.org/community/forum/topic/3503>

13. One hundred years of modern physical cosmology, Physics News, Oct.-Dec. 2019, p. 11

12. YouTube Video Lecture *Spontaneous quantum gravity*  
[https://www.youtube.com/watch?v=IJK\\_mE8K8uw](https://www.youtube.com/watch?v=IJK_mE8K8uw)  
Tejinder P. Singh (2019)

11. Blog: *Schrodinger's cat, and Einstein's space-time, in the twenty-first century*  
qfqq.blogspot.com  
Tejinder P. Singh (2019)

10. YouTube Video Lecture Series: *Thinking about Quantum Gravity*  
<https://www.youtube.com/watch?v=-TleM9cGBK4>  
Tejinder P. Singh (2018)

9. YouTube Video: *Does Nature Play Dice?*  
[https://www.youtube.com/watch?v=wSiDsMKS\\_uU](https://www.youtube.com/watch?v=wSiDsMKS_uU)  
Tejinder P. Singh (2015)

8. *Things, laws, and the human mind*, T. P. Singh, this essay received the fourth place prize in the 2018 essay contest 'What is fundamental?' conducted by the Foundational Questions Institute  
<https://fqxi.org/community/essay/winners/2017.2>  
Published in What is fundamental? Eds. Anthony Aguirre, Brendan Foster and Zeeya Meerali  
Springer: Frontiers Collection Series (2019)

7. *Cognitive science and the connection between physics and mathematics*; Anshu Gupta Mujumdar and T. P. Singh; This essay received the Special Prize for Creative Thinking in the 2015 Essay Contest "Trick or Truth: The Mysterious Connection between Physics and Mathematics" conducted by the Foundational Questions Institute  
<http://fqxi.org/community/essay/winners/2015.1>  
**arXiv:1506.03788 [physics.pop-ph]**  
Published in Trick or Truth? The Mysterious Connection Between Physics and Mathematics  
Eds. Anthony Aguirre, Brendan Foster and Zeeya Meerali  
Springer: Frontiers Collection Series (2016)

6. *Information and the foundations of quantum theory*, Angelo Bassi, Saikat Ghosh and T. P. Singh; This essay received the second prize in the essay contest "It from Bit, or Bit from It" conducted by the Foundational Questions Institute  
<http://fqxi.org/community/essay/winners/2013.1>

**arXiv:1310.8600**

Published in *It from Bit or Bit from It? On physics and information*

Eds. Anthony Aguirre, Brendan Foster and Zeeya Meerali

Springer: Frontiers Collection Series (2015)

5. *Is quantum linear superposition an exact principle of nature?* Angelo Bassi, Tejinder P. Singh and Hendrik Ulbricht; This essay received the fourth prize in the essay contest 'Which of our basic physical assumptions are wrong?' conducted by the Foundational Questions Institute

<http://fqxi.org/community/essay/winners/2012.1>

**arXiv:1212.0135**

Published in *Questioning the Foundations of Physics: Which of our fundamental physical assumptions are wrong?*

Eds. Anthony Aguirre, Brendan Foster and Zeeya Meerali

Springer: Frontiers Collection Series (2015)

4. *The three and a half layers of dynamics : analog, digital, semi-digital, analog;* T. P. Singh (2011); This essay received the fourth prize in the essay contest 'Is reality digital or analog?' conducted by the Foundational Questions Institute <http://fqxi.org/community/essay/winners/2011.1>

3. *Quantum theory, gravity, and the standard model of particle physics : using the hints of today to build the final theory of tomorrow,* T. P. Singh (2009); This essay received the fourth prize in the essay contest 'What is ultimately possible in Physics?' conducted by the Foundational Questions Institute [<http://fqxi.org/community/essay/winners/2009.1>]

2. *Noncommutative gravity, a quantum classical duality, and the cosmological constant puzzle,* T. P. Singh (2008) published online by [www.2physics.com](http://www.2physics.com) at <http://www.2physics.com/2008/06/evolution-of-system-in-quantum.html>

1. *Special relativity for the school-going child,* T. P. Singh, Published by TIFR in 'A revolution in physics : Einstein's 1905 discoveries made simple' (2005). [arXiv:physics/0411219].