

BIBLIOGRAPHY

Bibliography

- Ade, P.A.R. et al.(2014). Planck 2013 results-I.cosmological parameters. *Astron. Astrophys.*, 571, A1.
- Ade, P.A.R. et al.(2014a). Planck 2013 results-XVI. cosmological parameters. *Astron. Astrophys.*, 571, A16.
- Adhav, K.S.(2011). LRS Bianchi type-I Universe with anisotropic dark energy in Lyra geometry. *Int. J. Astron. Astrophys.*, 1(4), 204- 209
- Adhav, K.S., Agrawal, P.R. & Purandare, M.A.(2015). Bianchi type-III cosmological model with quadratic equation of state. *Afr. Rev. Phys.*, 10, 65.
- Adhav, K.S., Bansod, A.S., Munde, S.L. & Desale, M.S.(2011). Higher dimensional Bianchi type-V cosmological models with perfect fluid and dark energy. *Int. J. Theor. Phys.*, 50, 2573-2581
- Adhav, K.S., Bansod, A.S., Wankhade, R.P. & Desale, M.S.(2010a). Higher dimensional Bianchi type-I Universe with perfect fluid and dark energy. *Bulg. J. Phys.*, 37, 255-265.
- Adhav, K.S., Dawande, M.V., Thakare, R.S. & Raut, R.B.(2010). Bianchi type-III magnetized wet dark fluid cosmological model in general relativity. *Int. J. Theor. Phys.*, 50, 339–348
- Adhav, K.S., Nimkar, A.S., Ugale, M.R. and Raut, V.B.(2009). Bianchi type-I cosmological model in Lyra's manifold. *FIZIKA B*, 18(2), 55–60.
- Aditya, Y. & Reddy, D.R.K.(2018). Locally rotationally symmetric Bianchi type-I string cosmological models in $f(R)$ theory of gravity. *IJGMMP*, 15, 1850156 (15 p)
- Advani, P.(2021). Cosmological model of Bianchi type-V in perfect fluid and Lyra geometry with self-creation theory of gravitation. *Prespacetime J.*, 12(3), 253-262
- Allen, S.W.(1998). Resolving the discrepancy between X-ray and gravitational lensing mass measurements for clusters of galaxies. *Mon. Not. R. Astron. Soc.*, 296(2), 392-406.
- Allen, S.W. et al.(2001). Chandra measurements of the distribution of mass in the luminous lensing cluster abell 2390. *Mon. Not. R. Astron. Soc.*, 324(4), 877–890.
- Allen, S.W. et al.(2007). Improved constraints on dark energy from Chandra X-ray observations of the largest relaxed galaxy clusters. *Mon. Not. R. Astron. Soc.*, 383(3), 879–896.

- Alvarez, E. & Gavela, M.B.(1983). Entropy from extra dimensions. *Phys. Rev. Lett.*, 51, 931.
- Amirhashchi, H., Zainuddin, H. & Pradhan, A.(2011). Magnetized Bianchi type III string Universe with time decaying vacuum energy density Λ . *Int. J. Theor. Phys.*, 50, 2531–2545
- Ananda, K.N. & Bruni, M.(2006). Cosmological dynamics and dark energy with a nonlinear equation of State: A quadratic model. *Physical Rev. D*, 74(2), 023523
- Anderson, L. et al.(2012). The clustering of galaxies in the SDSS-III baryon oscillation spectroscopic survey: Baryon acoustic oscillations in the data release 9 spectroscopic galaxy sample. *Monthly Notices of the Royal Astronomical Society*, 427(4), 3435–3467.
- Asgar, A. & Ansari, M.(2014). Accelerating Bianchi type-VI₀ bulk viscous cosmological models in Lyra geometry. *J. Theor. Appl. Phys.*, 8, 219–224.
- Bali. R. & Chandnani, N.K.(2009). Bianchi type-III cosmological models with time dependent displacement vector for barotropic fluid distribution in Lyra geometry. *Int. J. Theor. Phys.*, 48, 3101–3109.
- Bali, R. & Meena, B.L.(2004). Conformally flat tilted Bianchi type-V cosmological models in general relativity. *Pramana J. Phys.*, 62, 1007-1014
- Bali, R. & Pareek, U.K.(2008). Bianchi type-III magnetized massive string cosmological model for perfect fluid distribution in general relativity. *Astrophys. Space Sci.*, 318, 237-242
- Bali, R., Pareek, U.K. & Pradhan, A.(2007). Bianchi type-I massive string magnetized barotropic perfect fluid cosmological model in general relativity. *Chin. Phys. Lett.*, 24, 2455–245
- Bali, R. & Pradhan, A.(2007). Bianchi type-III string cosmological models with time dependent bulk viscosity. *Chin. Phys. Lett.*, 24(4), 585-588
- Bali, R., Pradhan, A. & Amirhashchi, H.(2008). Bianchi type VI₀ magnetized barotropic bulk viscous fluid massive string Universe in general relativity. *Int. J. Theor. Phys.*, 47, 2594–2604
- Bali, R. & Singh, S.(2014). Bianchi type-I string dust models with bulk viscosity in Lyra geometry. *Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci.*, DOI 10.1007/s40010-014-0133-9
- Bamba, K., Capozziello, S., Nojiri, S. & Odintsov, S.D.(2012). Dark energy cosmology: the equivalent description via different theoretical models and cosmography tests. *Astrophys. Space Sci.*, 342, 155.

- Banerjee, A., Duttachoudhury, S.B. & Sanyal, A.K.(1985). Bianchi type I cosmological model with a viscous fluid. *J. Math. Phys.*, 26(11), 3010-3015
- Banerjee, A. & Sanyal, A.K.(1988). Irrotational Bianchi V viscous fluid cosmology with heat flux. *Gen. Rel. Grav.*, 20, 103–113.
- Banerjee, A., Sanyal, A. K. and Chakraborty, S.(1990). String cosmology in Bianchi I space-time. *Pramana J. Phys.*, 34, 1-11
- Banik, S.K. & Bhuyan, K.(2017). Dynamics of higher-dimensional FRW cosmology in $R_p \exp(\lambda R)$ gravity. *Pramana J. Phys.*, 88, 26.
- Basumatary, D. & Dewri, M.(2021). Bianchi type-VI₀ cosmological model with special form of scale factor in Sen-Dunn theory of gravitation. *J. Sci. Res.* 13(1), 137-143
- Beesham, A.K.(1993). Cosmological models with a variable cosmological term and bulk viscous models. *Physical rev. D*, 48(8), 3539-3543.
- Beesham, A.K.(1988). FLRW cosmological model in Lyra's manifold with time dependent displacement field. *Aust. J. Phys.*, 41(6), 833-842.
- Beesham, A.K., Tiwari, R.K. & Mishra, S.(2020). Cosmological model with quadratic EOS in f(R, T) theory. *Afr. Rev. Phys.*, 50, 0009
- Bennett, C.L. et al.(2003). The Microwave Anisotropy Probe Mission. *The Astrophysical J.*, 583(1), 1-23.
- Bennett, C.L. et al.(2003a). First-year Wilkinson Microwave Anisotropy Probe (WMAP) observations: Preliminary maps and basic results. *The Astrophysical J. Suppl. Ser.*, 148(1), 1-27.
- Bennett, C.L. et al.(2011). Seven-year Wilkinson Microwave Anisotropy Probe (WMAP) observations: Are there cosmic microwave background anomalies?. *The Astrophysical J. Suppl. Ser.*, 192(2), 17.
- Bennett, C.L. et al.(2013). Nine-year Wilkinson Microwave Anisotropy Probe(WMAP) observations: Final maps and results. *The Astrophysical J. Suppl. Ser.*, 208(2), 20.
- Benoit-Lévy, A. & Chardin, G.(2012). Introducing the Dirac-Milne Universe. *Astron. Astrophys.*, 537, 78
- Berman, M.S.(1983). A special law of variation for Hubble's parameter. *Nuov. Cim. B*, 74, 182-186
- Bhamra, K.S.(1974). A cosmological model of class one in Lyra's manifold. *Aust. J. Phys.*, 27, 541-547.

- Blanton, M.R. et al.(2017). Sloan digital sky survey IV: Mapping the milky way, nearby galaxies and the distant Universe. *The Astronomical J.*, 154(1), 1-35.
- Borgade, K.R., Bhoyar, S.R. & Basotia, V.(2021). Dynamics of bulk viscous string cosmological model in F(R,G) theory of gravity. *IJRESM*, 4(4), 89-97
- Bull, P. et al.(2016). Beyond Λ CDM: Problems, solutions and the road ahead. *Phys. Dark Universe*, 12, 56-99
- Çağlar, H. & Aygün, S.(2016). Exact solutions of bulk viscous with string cloud attached to strange quark matter for higher dimensional FRW universe in Lyra geometry. *AIP Conf. Proc.*, 1722, 050001
- Capozziello, S. et al.(2006). Observational constraints on dark energy with generalized equations of state. *Phys. Rev. D*, 73, 043512.
- Chakraborty, S. & Debnath, U.(2010). Higher dimensional cosmology with normal scalar field and tachyonic field. *Int. J. Theor. Phys.* 49, 1693-1698.
- Charles, W.(1968). The isotropy of the Universe. *Astrophysical J.* 151, 431–457.
- Chatterjee, S.(1993). Massive strings in higher dimensional inhomogeneous space-time. *Gen. Rel. Grav.* 25, 1079-1087.
- Chavanis, P.H.(2013). A cosmological model based on a quadratic equation of state unifying vacuum energy, radiation and dark energy. *J. Grav.*, 682451
- Chavanis, P.H.(2015). A cosmological model describing the early inflation, the intermediate decelerating expansion and the late accelerating expansion of the Universe by a quadratic equation of state. *Universe*, 1, 357-411.
- Chawla, C., Mishra, R.K. & Pradhan, A.(2012). Anisotropic Bianchi-I cosmological model in string cosmology with variable deceleration parameter. *arXiv:1203.4014v3 [physics.gen-ph]* 14 Nov 2012
- Choudhury, S.(2017). Bianchi type I Universe in BraneWorld scenario with non-zero Weyl tensor of the bulk. *Eur. Phys. J. C*, 77, 619–622.
- Coley, A.A.(1990). Bianchi V imperfect fluid cosmology. *Gen. Rel. Grav.* 22, 3-18.
- Collins, C.B., Glass, E.N. & Wilkinson, D.A.(1980). Exact spatially homogeneous cosmologies. *Gen. Rel. Grav.*, 12(10), 805-823.
- Collins, C.B. & Hawking, S.W.(1973). Why is the Universe isotropic?. *Astrophysical J.*, 180, 317-334

- Daimary, J. & Baruah, R.R.(2021). Five dimensional Bianchi type-I string cosmological model with electromagnetic field. *J. Math. Comput. Sci.* 11(5), 6599-6613
- Di Pietro, E. & Demaret, J.(1999). Scale factor duality in string Bianchi cosmologies. *Int. J. Mod. Phys. D*, 8(3), 349-361
- Dubey, R.K., Ram, S., Yadav, N. & Dwivedi, P.(2017). Bianchi type -II Universe with anisotropic dark energy in Lyra geometry. *Adv. in Astrophys.* 2(4), 231-237
- Dubey, R.K., Shukla, B.V. & Yadav, N.(2018). On mathematical analysis for Bianchi type-I string cosmological model in modified theory of relativity. *Phys. Astron. Int. J.*, 2(2), 143-146
- Dubey, R.K. & Srivastava, S.K.(2018). A new class LRS Bianchi type-V string dust cosmological model in modified general relativity. *IJRAT*. 6, 3684-3686.
- Dubey, R.K. & Srivastava, S.K. & Dwivedi, V.K.(2018). Bianchi type-III string cosmological models with the help of cosmological constant and bulk viscosity in general relativity. *IOSR-JM*, 13(6), 13-19
- Dutta Choudhury, S.B. & Sil, A.(2006). Λ Varying cosmological models with viscous fluid. *Astrophys. space sci.*, 301(1-4), 61-64.
- Einstein, A.(1927). On Kaluza's theory of the connection between gravitation and electromagnetism. *Meeting report of the Preussian Academy of Science, Phys-Math. Class*, pp. 23-30
- Eisenstein, D.J. et al.(2011). SDSS-III: Massive spectroscopic surveys of the distant Universe, the milky way, and extra-solar planetary systems. *The Astronomical J.*, 142(3), 72
- Everett, A.E.(1981). Cosmic strings in unified Gauge theories. *Phys. Rev. D*, 24(4), 858-568
- Feroze, T. & Siddiqui, A. A.(2011). Charged anisotropic matter with quadratic equation of state. *Gen. Rel. Grav.* 43, 1025.
- Gad, R.M.(2011). Axially symmetric cosmological mesonic stiff fluid models in Lyra geometry. *Canadian J. Phys.* 89(7), 773-778
- Gadbail, G., Arora, S. & Sahoo, P.K.(2021). Viscous cosmology in the Weyl-type f(Q,T) gravity. *arXiv:2110.02726v1 [gr-qc]* 4 Oct 2021
- Gaikwad, N.P., Lepse, P.V., Bishi, B.K. & Ashtankar, N.K.(2021). Bulk viscous bianchi type-I barotropic fluid cosmological model with varying Λ and functional

- relation on Hubble parameter in Rosen's bimetric gravity. *Adv. Math. Sci. J.*, 10 (5), 2515–2525
- Ghate, H.R., Sontakke, A.S. & Patil, Y.D.(2015). Bianchi type-IX anisotropic dark energy cosmological models with time dependent deceleration parameter. *Int. J. Astron. Astrophys.*, 5, 302-323.
- Goswami, G.K., Dewangan, R.N., Yadav, A.K. & Pradhan, A.(2016). Anisotropic string cosmological models in Heckmann-Schucking space-time. *Astrophys. Space Sci.* 361, 1–10.
- Gunn, J.E. et al.(2006). The 2.5 m telescope of the sloan digital sky survey. *The Astronomical J.*, 131 (4), 2332–2359.
- Guth, A.H.(1981). Inflationary Universe: A possible solution to the horizon and flatness problems. *Phys. Rev. D*, 23, 347.
- Guth, A.H. & Weinberg, E.J.(1983). Could the Universe have recovered from a slow first-order phase transition?. *Nuclear Phys. B*, 212(2), 321-364.
- Hajdukovic, D.S.(2012). Quantum vacuum and dark matter. *Astrophys. Space Sci.*, 337(1), 9–14.
- Hajj-Boutros, J.(1985). On hypersurface-homogeneous space-times. *J. Math. Phys.*, 26, 2297
- Halford, W.D.(1970). Cosmological theory based on Lyra's geometry. *Aust. J. Phys.*, 23, 863-870.
- Halford, W.D.(1972). Scalar-Tensor theory of gravitation in a Lyra manifold. *J. Math. Phys.*, 13, 1699-1703
- Hawking, S.W. & Ellis, G.F.R.(1974). The large scale structure of space-time. *Cambridge*, England, 88.
- Heller, M. & Suszycki, L.(1974). Dust-filled viscous universes. *Acta. Physica Polonica. Series B*, 5(3), 345-351
- Hinshaw, G. et al.(2003). First-year Wilkinson Microwave Anisotropy Probe (WMAP) observations: Data processing methods and systematic error limits. *Astrophys. Suppl. Ser.*, 148, 63–95.
- Hinshaw, G. et al.(2007). Three-year Wilkinson Microwave Anisotropy Probe (WMAP) observations: Temperature analysis. *The Astrophysical J. Suppl. Ser.*, 170 (2), 288-334. 124

- Hinshaw, G. et al.(2009). Five-year Wilkinson Microwave Anisotropy Probe (WMAP) Observations: Data processing, sky maps, and basic results. *The Astrophysical J. Suppl. Ser.*, 180(2), 225-245.
- Hinshaw, G. et al.(2013). Nine-year Wilkinson Microwave Anisotropy Probe (WMAP) observations: Cosmological parameter results. *The Astrophysical J. Suppl. Ser.*, 208(2), 19.
- Hubble, E.(1929). A relation between distance and radial velocity among extra-galactic nebulae. *PNAS*, 15(3)
- Humad, V., Nagar, H. & Shrimali, S.(2016). Bulk viscous fluid Bianchi type-I string cosmological model in general relativity. *IOSR-JM*, 12(2),11-15
- Humad, V., Shrimali, S. & Singh, G.P.(2014). LRS Bianchi type –III massive string cosmological model with electromagnetic field. *Ultra Scientist*, 26(3), 271-276
- Ivanov, B.V.(2002). Static charged perfect fluid spheres in general relativity. *Phys. Rev. D*, 65, 104001
- Jesus, W.D.R. & Santos, A.F.(2018). On causality violation in Lyra geometry. *IJGMMP*, 15(8), 1850143.
- Johri, V.B. & Sudarshan, R.(1988). Friedmann universes with bulk viscosity. *Phys. Lett. A*, 132(6-7), 316-320
- Johri, V.B. & Sudarshan, R.(1989). BD-FRW cosmology with bulk viscosity. *Aust. J. Phys.*, 42,215
- Jokweni, S., Singh, V. & Beesham, A.(2021). LRS Bianchi I model with bulk viscosity in f(R, T) gravity. *arXiv:2106.01757v1 [gr-qc]* 3 Jun 2021
- Jumale, R.K., Mohurley, I.S., Gahane, D.H. & Jumale, J.(2016). Five-dimensional anisotropic Bianchi type cosmological models with constant deceleration parameter. *Prespacetime J.*, 7 (12), 1493-1502.
- Kaiser, N. & Stebbins, A.(1984). Microwave snisotropy due to cosmic strings. *Nature*, 310, 391–393.
- Kaluza, T.(1921). Zum unitätsproblem der physik Sitzungsber. *Preuss Akad. Wiss. Berlin Math. Phys.*, 22, 966.
- Kaluza, T.(1921a). On the problem of unity in physics. *Sitzungsber. Preuss. Akad. Wiss.Berlin (Math. Phys.)* 1921, 966-972

- Kandalkar, S.P., Khade, P. & Gaikwad, M.(2012). Bianchi-V cosmological models with viscous fluid and constant deceleration parameter in general relativity. *Turk. J. Phys.*, 36, 141-154
- Kandalkar, S.P. & Samdurkar, S.(2015). LRS Bianchi type I cosmological model with bulk viscosity in Lyra geometry. *Bulg. J. Phys.*, 42, 42-52.
- Kandalkar, S.P., Samdurkar, S.W. & Gawande, S.P.(2012). Bianchi type-III string cosmological models in the presence of magnetic field in general relativity. *Int. J. Sci. Eng. Res.*, 3, 1-7.
- Kandalkar, S.P., Wasnik, A.P. & Gawande, S.P.(2011). Some Bianchi type-I string cosmological models with bulk viscosity. *Rom. J. Phys.*, 56, 289-296
- Kandalkar, S.P., Wasnik, A.P., Gawande, S.P., & Gaikwad, M.N.(2012). Cosmic string in Bianchi type-III space-time with bulk viscosity and magnetic field. *Int. J. Astron. Astrophys.*, 2, 225-229
- Kantowski, R. & Sachs, R.K.(1966). Some spatially homogeneous anisotropic relativistic cosmological models. *J. Math. Phys.*, 7, 443-446
- Katore, S.D. & Kapse, D.V.(2017). Dynamics of Bianchi type-VI₀ holographic dark energy models in general relativity and Lyra's geometry. *Pramana J. Phys.* 88, 30
- Katore, S.D. & Kapse, D.V.(2018). Bianchi type-I dark energy cosmological model with polytropic equation of state in Barber's second self-creation cosmology. *IJMTT*, 53(6), 476-487
- Khadekar, G.S., Patki, V.A & Radha, R.(2005). String dust cosmological model in higher-dimensional space-time. *Int. J. Mod. Phys. D*. 14, 1621–1634.
- Khadekar, G.S., Patki, V.A & Radha, R.(2007). String cosmological model with bulk viscosity in higher dimensional space time. *J. of Dynamical Systems and Geometric Theories.*, 5(2), 117-123.
- Khadekar, G.S. & Tade, S.D.(2007). String cosmological models in five dimensional bimetric theory of gravitation. *Astrophys. Space Sci.*, 310, 47-51.
- Khadekar, G.S. & Vrishali, P.(2005). String dust cosmological model in higher-dimensional space time. *Int. J. Mod. Phys. D*, 14(9), 1621-1634.
- Kibble, T.W.B.(1976). Topology of cosmic domains and strings. *J. Phys. A.: Math. Gen.*, 9(8), 1387-1398
- Kibble, T.W.B.(1980). Some implications of a cosmological phase transition. *Phys. Rept.*, 67(1), 183-199.

- Kiran, M., Reddy, D.R.K. & Rao, V.U.M.(2015). Minimally interacting holographic dark energy model in Brans-Dicke theory. *Astrophys. Space Sci.*, 356,407-411.
- Klein, O.(1926). Quantentheorie und fünfdimensionale Relativitätstheorie. *Z. Physik.*, 37, 895-906.
- Kristian, J. & Sachs. R.K.(1966). Observations in cosmology. *Astrophys. J.*, 143, 379-399
- Krori, K.D., Chaudhuri, T. & Mahanta, C.R.(1994). Strings in some Bianchi type cosmologies. *Gen. Rel. Grav.*, 26, 265-274.
- Kumar, S. & Singh, C.P.(2008). An exact Bianchi type-I cosmological model in Lyra's manifold. *Int. J. Mod. Phys. A.*, 23(6), 813-822
- Ladke, L.S.(2014). Five dimensional Bianchi type-I (Kasner Form) cosmological models. *Int. J. Sci. Innov. Math. Res.*, 2(5), 453-459.
- Ladke L.S., Hiwarkar, R.A. & Jaiswal, V.K.(2016). Five dimensional Bianchi type-V space-time in f(R,T) theory of gravity. *Int. J. Eng. Res. App.*, 6, 81-89
- Letelier, P.S.(1979). Clouds of strings in general relativity. *Phys. Rev. D*, 20(6), 1249-1302
- Letelier, P. S.(1983). String cosmologies. *Phys. Rev. D*, 28, 2414-2419.
- Lorenz-Petzold, D.(1984). Exact Brans-Dicke-Bianchi type-V solutions. *Math. Proc. Camb. Philos. Soc.*, 96(1), 183-189
- Lyra, G.(1951). Über-eine Modifikation der Riemannschen geometrie. *Mathematische Zeitschrift.*, 54, 52-64.
- Maartens, R. & Nel, S.D.(1978). Decomposable differential operators in a cosmological context. *Comm. Math. Phys.*, 59, 273-283
- MacCallum, M.A.H.(1979). Anisotropic and inhomogeneous relativistic cosmologies, in general relativity: An Einstein centenary survey, eds. S.W. Hawking & W. Isreal (Cambridge Univ. Press), pp. 533-580
- Mahanta, C.R. & Das, M.P.(2021). Bianchi type III new holographic dark energy model with hybrid expansion law and variable G and Λ . *Adv. Math. Sci. J.*, 10 (3), 1691–1706
- Mahanta, K.L. & Biswal, A.K.(2012). String cloud and domain walls with quark matter in Lyra geometry. *J. Mod. Phys.*, 3, 1479-1486

- Maharaj, S.D. & Takisa, P.M.(2012). Regular models with quadratic equation of state. *Gen. Rel. Grav.*, 44, 1419.
- Marciano, W.J.(1984). Time variation of the fundamental "Constants" and Kaluza-Klein theories. *Phys. Rev. Lett.*, 52 :489.
- Marsha, W.(2000). Dynamics of magnetic Bianchi VI₀ cosmologies. *Class. Quantum Grav.*, 17, 421
- Maurya, D.C. & Zia, R.(2019). Brans-Dicke scalar field cosmological model in Lyra's geometry. *Physical Rev. D*, 100(2): 023503(1-13)
- Megied, M.A., Gad, R.M. & Hegazy, E.A.(2009). Inhomogeneous Bianchi type-I cosmological model with electromagnetic field in Lyra geometry. *Assiut Univ. J. Math. Comp. Sci.*, 38(2), 1-10
- Mermin, N.D.(1979). The topological theory of defects in ordered media. *Rev. Mod. Phys.*, 51(3), 591-648
- Mishra, B. & Biswal, S.K.(2014). Five dimensional Bianchi type-VI₀ dark energy cosmological models in general relativity. *Afr. Rev. phys.*, 9, 77-83
- Misner, C.W.(1967). Transport processes in the primordial fireball. *Nature*, 214, 40
- Misner, C.W.(1968). The isotropy of the Universe. *J. Astrophys.*, 151, 431.
- Mohanty, G., Sahoo, R.R. & Bishi, B.K.(2009). Non existence of five dimensional string cosmological models in Riemannian and Lyra geometries. *Astrophys. Space Sci.*, 319, 75-79
- Mohanty, G. & Mahanta, K.L.(2007). Five dimensional axially symmetric string cosmological model in Lyra manifold. *Astrophys. Space Sci.*, 312, 301-304.
- Mohanty, G. & Pattanaik, R.R.(1991). Anisotropic, spatially homogeneous, bulk viscous cosmological model. *Int. J. Phys.* 30 (2), 239-244
- Mohanty, G. & Pradhan, B.D.(1990). Bulk viscous cosmological model. *Astrophys. Space Sci.*, 165, 163-167
- Mohanty, G. & Pradhan, B.D.(1991). Robertson-Walker viscous fluid model. *Astrophys. Space Sci.*, 181, 1-5
- Mohanty, G., Sahoo, P.K., & Mishra, B.(2002). On Bianchi type-I mesonic cosmological model in bimetric theory. *Astrophys. Space Sci.*, 281, 609–612.

- Mohanty, G., Sahoo, R.R. & Mahanta, K.L.(2007a). Five dimensional LRS Bianchi type-I string cosmological model in Saez and Ballester theory. *Astrophys. Space Sci.*, 312, 321-324
- Mohanty, G. & Samanta, G.C.(2009). Five dimensional axially symmetric string cosmological models with bulk viscous fluid. *Int. J. Theor. Phys.*, 47, 2311
- Mohanty, G. & Samanta, G.C.(2010). Five dimensional string cosmological models with massive scalar field. *FIZIKA B*, 19, 43-52.
- Mohanty, G. & Samanta, G.C.(2010a). Five dimensional LRS Bianchi type-I String Cosmological model in general relativity. *FIZIKA B*, 19, 239-246.
- Mohanty, G., Samanta, G.C. & Mahanta, K.L.(2007). Higher dimensional string cosmological model with bulk viscous fluid in Lyra manifold. *Commn. Phys.*, 17(4) 213-220
- Mollah, M.R. & Singh, K.P.(2016). Higher dimensional cosmological model Universe with quadratic equation of state in Lyra geometry. *Prespacetime J.*, 7(3), 499-508
- Mollah, M.R., Singh, K.P. & Singh, K.M.(2015). Five dimensional string universes in Lyra Manifold. *Int. J. Astron. Astrophys.*, 5, 90-94
- Mollah, M.R., Singh, K.P. & Singh, P.S.(2018). Bianchi type-III cosmological model with quadratic EoS in Lyra geometry. *IJGMMP*, 15(11) 1850194 (16 pages)
- Mostafapoor, N. & Gron, O.(2011). Viscous Λ CDM universe models. *Astrophys. Space Sci.*, 333(2), 357-368.
- Muharlyamov, R.K, & Pankratyeva, N.T.(2018). Interacting dark sector and the coincidence problem within the scope of LRS Bianchi type-I model. *Astrophys. Space Sci.*, 363, 95
- Mukhanov, V.F.(2005). Physical foundations of cosmology. *United Kingdom: Cambridge University Press.* (pp. 58)
- Murphy, G.L.(1973). Big-bang model without singularities. *Phys. Rev. D*, 8(12), 4231-4233
- Nightingale, J.D.(1973). Independent investigations concerning bulk viscosity in relativistic homogenous isotropic cosmologies. *Astrophys. J.*, 185, 105-114
- Nojiri, S. & Odintsov, S.D.(2004). Final state and thermodynamics of a dark energy Universe. *Phys. Rev. D*, 70, 103522.

- Nojiri, S. & Odintsov, S.D.(2005). Inhomogeneous equation of state of the Universe: Phantomera, future singularity, and crossing the phantom barrier. *Phys. Rev. D*, 72, 023003.
- Nojiri, S. & Odintsov, S.D.(2011). Unified cosmic history in modified gravity: From F (R) theory to Lorentz non-invariant models. *Phys. Rept.* 505, 59.
- Nojiri, S., Odintsov, S.D. & Tsujikawa, S.(2005). Properties of singularities in the (phantom) dark energy Universe. *Phys. Rev. D*, 71,063004.
- Padmanabhan, T. & Chitare, S.M.(1987). Viscous Universes. *Phys. Lett. A*, 120(9), 433-436
- Page, L. et al.(2007). Three-year Wilkinson microwave anisotropy probe(WMAP) observations: Polarization analysis. *Astrophys. Suppl. Ser.*, 170, 335–376.
- Pando, J., Gavaud, D.V. & Fang, L.(1998). Evidence for scale-scale correlations in the cosmic microwave background radiation. *Phys. Rev. Lett.*, 81(21), 4568-4571.
- Pant, D.N. & Oli, S.(2002). Two-fluid Bianchi type II cosmological models. *Astrophys. Space Sci.*, 281, 623–631
- Parikh, S., Tyagi, A. & Tripathi, B.R.(2018). Lyra's geometry in a Bianchi type II string dust cosmological model with an electromagnetic field. *Prespacetime J.*, 9, 288-296.
- Pawar, D.D. & Deshmukh, A.G.(2010). Bulk viscous fluid plane symmetric string cosmological model in general relativity. *Bulg. J. Phys.* 37, 56–63.
- Pawar, K., Chauhan, V., Rathod, G.D. & Saraykar, R.V.(2013). Five dimensional perfect fluid coupled with massless scalar field cosmological model in GTR. *IOSR-JM*, 5(6) 14-16.
- Perlmutter, S. et al.(1998). Discovery of a supernova explosion at half the age of the Universe. *Nature (London)*, 391, 51-54.
- Perlmutter, S. et al.(1999). Measurements of Ω and Λ from 42 high- redshifts supernovae. *Astrophys. J.*, 517, 565-586
- Poonia, L .& Sharma, S.(2021). Inflationary scenario in Bianchi type II space with bulk viscosity in general relativity. *Annals of R.S.C.B.*, 25(2), 1223–1229
- Poonia, L., Sharma, S. & Kumawat, S.(2021). Bianchi type-VI inflationary cosmological model with massive string Source in general relativity. *J. Nano- Electron. Phys.*, 13(3), 03022(5pp)

- Pradhan, A.(2011). Anisotropic Bianchi type-I magnetized string cosmological models with decaying vacuum energy density $\Lambda(t)$. *Commun. Theor. Phys.*, 55(5), 931–941
- Pradhan, A., Amirhashchi, H. & Zainuddin, H.(2011). Exact solution of perfect fluid massive string cosmology in Bianchi type III space-time with decaying vacuum energy density Λ . *Astrophys. Space Sci.*, 331, 679–687
- Pradhan, A. et al.(2012). Anisotropic Bianchi type-I massive string cosmological models in general relativity. *Palestine J. Math.*, 1(2), 118–133.
- Pradhan, A. & Chauhan, D.S.(2006). A new class of LRS Bianchi type-I cosmological models in Lyra's manifold. *arXiv:gr-qc/0608056v1 10 Aug 2006*
- Pradhan, A. & Jaiswal, R.(2018). Magnetized string cosmological models of acceleration. *Int. J. Geom. Meth. Mod. Phys.*, 15, 24 pages
- Pradhan, A., Jaiswal, R. & Khare, R.K.(2013). Bianchi type-I cosmological models with time dependent q and Λ -term in general relativity. *Astrophys. Space Sci.*, 343, 489–497
- Pradhan, A. & Kumar, A.(2001). LRS Bianchi I cosmological Universe models with varying cosmological term. *Int. J. Mod. Phys. D*, 10, 291
- Pradhan, A., Otarod, S. & Singh, S.K.(2007). Magnetized anisotropic bulk viscous cosmological models with a variable Λ -term. *Chin. J. Phys.*, 45(5), 504-517
- Pradhan, A. & Rai, A.(2004). Tilted Bianchi type-V bulk viscous cosmological models in general relativity. *Astrophys. Space Sci.*, 291, 151–162
- Pradhan, A. & Vishwakarma, A.K.(2004). A new class of LRS Bianchi type-I cosmological model in Lyra geometry. *J. Geom. Phys.*, 49(3-4), 332-342
- Pradhan, A., Yadav, L. & Yadav, A.K.(2005). Isotropic homogeneous Universe with a bulk viscous fluid in Lyra geometry. *Astrophys. Space Sci.*, 299, 31–42.
- Rahaman, F., Begum, N., Bag, G. & Bhui, B.C.(2005). Cosmological model with negative constant deceleration parameter in Lyra geometry. *Astrophys. Space Sci.*, 299, 211-218
- Rahaman, F., Chakraborty, S. & Bera, J.(2002). Inhomogeneous cosmological models in Lyra geometry. *Int J. Mod. Phys.*, 11, 1501-1507.
- Rahaman, F., Chakraborty, S., Das, S., Hossain, M. & Bera, J.(2003). Higher dimensional string theory in Lyra geometry. *Pramana J. Phys.*, 60, 453–459.
- Rahaman, F., Jamil, M. & Chakraborty, K.(2011). Revisiting the classical electron model in general relativity, *Astrophys. Space Sci.* 331 191–197.

- Ram, S.(1989). Generation of LRS Bianchi type-I Universe filled with perfect fluids. *Gen. Rel. Grav.*, 21, 697
- Ram, S.(1990). Bianchi type-V perfect fluid space-time. *Int. J. Theor. Phys.*, 29, 901
- Ram, S. & Verma, M.K.(2019). Spatially homogeneous Bianchi type I mesonic models in two-fluid cosmology. *Prespacetime J.*, 10, 293-300.
- Rao, V.U.M., Jayasudha, V. & Reddy, D.R.K.(2015). Five dimensional cosmological model with quadratic equation of state in a scalar-tensor theory of gravitation. *Prespacetime J.*, 6, 787-793.
- Rao, V.U.M. & Santhi, M.V.(2008). Bianchi type-V cosmological model with perfect fluid using negative constant deceleration parameter in a Scalar Tensor theory based on Lyra manifold. *Astrophys. Space Sci.*, 314(1-3), 213-216
- Rao, V.U.M., Vinutha, T. & Santhi, M.V.(2008). Bianchi type-V cosmological model with perfect fluid using negative constant deceleration parameter in a Scalar Tensor theory based on Lyra manifold. *Astrophys. Space Sci.*, 314(1-3), 213-216.
- Rathore, G.S. & Mandawat K.(2010). Five dimensional strings cosmological models with bulk viscous fluid in Lyra geometry. *Adv. Studies Theor. Phys.*, 4(17), 827-835
- Reddy, D.R.K.(2005). Plane symmetric cosmic strings in Lyra manifold. *Astrophys. Space Sci.* 300(4), 381-386.
- Reddy, D.R.K.(2018). Bianchi type-II inflationary Universe with massive string Source in general relativity. *Prespacetime J.*, 9, 432-440
- Reddy, D.R.K., Adhav, K.S. & Purandare, M.A.(2015). Bianchi type-I cosmological model with quadratic equation of state. *Astrophys. Space Sci.*, 20, 357.
- Reddy, D.R.K. & Innaiah, P.(1985). An anisotropic cosmological model in Lyra's manifold. *Astrophys. Space Sci.*, 114(2), 285-288
- Reddy, D.R.K. & Innaiah, P.(1986). A plane symmetric cosmological model in Lyra manifold. *Astrophys. Space Sci.*, 123(1), 49-52
- Reddy, D.R.K. & Naidu, R.L.(2007). Five dimensional string cosmological models in a Scalar-Tensor theory of gravitation. *Astrophys. Space Sci.*, 307, 395-398.
- Reddy, D.R.K., & Raju, K.D.(2019). Dark energy model in a five-dimensional space-time with a massive scalar field. *Prespacetime J.*, 10(8), 1094-1103
- Reddy, D.R.K. & Ramesh, G.(2019). Five dimensional anisotropic dark energy cosmological model in the presence of scalar-meson field in general relativity. *Int. J. Cosmol. Astron. Astrophys.*, 1(2), 67-70.

- Reddy, D.R.K. & Rao, M.V.S.(2006a). Axially symmetric string cosmological model in Brans-Dicke theory of gravitation. *Astrophys. space Sci.*, 305, 183-186.
- Reddy, D.R.K. & Rao, M.V.S.(2006). Axially symmetric cosmic strings and domain walls in Lyra geometry. *Astrophys. space Sci.*, 302(1), 157-160.
- Reddy, D.R.K. & Rao, V.N.(2001). Some cosmological models in Scalar-Tensor theory of gravitation. *Astrophys. Space Sci.*, 277, 461.
- Riess, A.G. et al.(1998). Observational evidence from Supernovae for an accelerating Universe and a cosmological constant. *Astron. J.*, 116, 1-36
- Riess, A.G. et al.(2004). Type Ia Supernova discoveries at $z > 1$ from the Hubble space telescope: Evidence for past deceleration and constraints on dark energy evolution. *The Astrophysical J.*, 607(2), 665-687
- Saha, B., Amirhashchi, H. & Pradhan, A.(2012). Two-fluid scenario for dark energy models in an FRW Universe-revisited. *Astrophys. Space Sci.*, 342(1), 257-267.
- Sahoo, P.K. & Mishra, B.(2015). Higher dimensional Bianchi type-III Universe with strange quark matter attached to string cloud in general relativity. *Turk. J. Phys.*, 39, 43-53.
- Sahoo, P.K., Nath, A., & Sahu S.K.(2017). Bianchi type-III string cosmological model with bulk viscous fluid in Lyra geometry. *Iran J. Sci. Technol. Trans. Sci.*, 41, 243-248
- Samanta, G.C., Biswal, S.K. & Mohanty, G.(2011). Some five dimensional Bianchi type-III string cosmological models in general relativity. *Bulg. J. Phys.*, 38, 380-389.
- Samanta, G.C. & Debata, S.(2012). Five dimensional Bianchi type-I string cosmological models in Lyra manifold. *J. Mod. Phys.*, 3, 180-183
- Sarma, N.(2021). Bianchi type-I cosmological model with Tsallis holographic dark energy in $f(R,T)$ theory of gravity. *IJST*, 14(18), 1468–1476
- Scheibe, E.(1952). Über-einen Verallgemeinerten Affinen Zusammenhang. *Math. Z.* 57, 65-74
- Schwarz, J.H.(2001). The future of string theory. *J. Math. Phys.*, 42(7), 2889-2895
- Sen, D.K.(1957). A static cosmological model. *Z. Phys.* 149, 311.
- Sen, D.K.(1960). On geodesics of a modified Riemannian manifold. *Can. Math. Bull.*, 3, 255-261
- Sen, D.K. & Dunn, K.A.(1971). A scalar tensor theory of gravitation in a modified Riemannian manifold. *J. Math. Phys.*, 12, 578.

- Sen, D.K. & Vanstone, J.R.(1972). On Weyl and Lyra manifolds. *J. Math. Phys.*, 13(7), 990-993.
- Sharma, R. & Maharaj, S.D.(2007). A class of relativistic stars with a linear equation of state. *Mon. Not. R. Astron. Soc.*, 375, 1265
- Sharma, S. & Poonia, L.(2021). Cosmic inflation in Bianchi type-IX space with bulk viscosity. *Adv. Math. Sci. J.*, 10 (1), 527–534
- Sharma, S., Poonia, L. & Maheshwari, V.(2021). String cosmological model in Bianchi type IX inflationary universe with flat potential. *IOP Conf. Ser.: Earth and Environmental Sci.*, 785, 012006
- Silk, J.(1989). The Big Bang, *Freeman and Company, New York* (1989)
- Singh, A., Upahyay, R.C. & Pradhan, A.(2013). Some Bianchi type-III bulk viscous massive string cosmological models with electromagnetic field. *ARPN J. Sci. techn.*, 3(2), 146-152
- Singh, C.P.(2012). FRW models with particle creation in Brans-Dicke theory. *Astrophys. space Sci.*, 338,411-419
- Singh, C.P.(2013). String cosmology with magnetized bulk viscous fluid in Bianchi-I Universe, *Astrophys. Space Sci.*, 343(2), 773-781
- Singh, C.P. & Kumar, S.(2006). Bianchi type-II cosmological models with constant deceleration parameter. *Int. J. Mod. Phys.*, 15, 419-438.
- Singh, G.P., Bishi, B.K. & Sahoo, P.K.(2016). Bianchi type-I bulk viscous cosmology with chaplygin gas in Lyra geometry. *Chin. J. Phys.* 54(6), 895-905.
- Singh, G.P., Deshpande, R.V. & Singh, T.(2004). Higher-dimensional cosmological model with variable gravitational constant and bulk viscosity in Lyra geometry. *Pramana J. Phys.*, 63, 937–945
- Singh, G.P. & Desikan, K.(1997). A new class cosmological models in Lyra geometry. *Pramana J. Phys.*, 49(2), 205-212
- Singh, I. & Singh, G.(1998). Cosmological massive scalar field interacting with viscous fluid. *Astrophys. space sci.*, 259(2), 109-116
- Singh, J.P., Tiwari, R.K. & Shukla, P.(2007). Bianhi type –III cosmological models with gravitational constant G and the cosmological constant Λ . *Chin. Phys. Lett.*, 24(12), 3325-3327
- Singh, K.P. & Daimary, M.(2019). Anisotropic cloud string cosmological model with Bianchi type-I space-time in general relativity. *The Afr. Rev. Phys.*, 14, 94-99

- Singh, K.P. & Mollah, M.R.(2016). Higher dimensional LRS Bianchi type-I cosmological model Universe Interacting with perfect fluid in Lyra Geometry. *The Afr. Rev. phys.*, 11, 33-38.
- Singh, K.P. & Mollah, M.R.(2018). Bianchi type III cosmological model with hybrid scale factor in the presence of Van der Waals fluid in Lyra manifold. *IJMPA*, 33(35), 1850207 (13 pages)
- Singh, K.P. & Singh, P.S.(2019). Dark energy on higher dimensional spherically symmetric Brans-Dicke Universe. *Chin. J. Phys.*, 60, 239-247
- Singh, M.K., Verma, M.K., & Ram, S.(2013). Anisotropic Bianchi type-II viscous fluid models with time-dependent gravitational and cosmological constants. *Int. J. Phys.*, 4, 77-83.
- Singh, P.K. & Singh, K.M.(2014). On Bianchi type-III string cloud Universe containing strange quark matter. *Int. J. Astron. Astrophys.*, 4, 544-549.
- Singh, P.S. & Singh, K.P.(2020). A higher dimensional cosmological model for the search of dark energy source. *IJGMMP*, 18, 2150026
- Singh, R.P. & Yadav, L.(2009). Some Bianchi type I cosmological models of the Universe for viscous fluid distribution in Lyra geometry. *EJTP*, 6(22), 61–78
- Singh, T. & Agrawal, A.K.(1993).Homogeneous anisotropic cosmological models with variable gravitational and cosmological constants. *Int. J. Theor. Phys.*, 32, 1041- 1059
- Singh, T. & Singh, G.P.(1991). Bianchi type-I cosmological models in Lyra's geometry. *J. Math. Phys.*, 32(3), 2456-2458.
- Singh, T. & Singh, G.P.(1991a). Bianchi type III and Kantowski-Sachs cosmological models in Lyra's geometry. *Astrophys. Space Sci.*, 181(1), 89-101
- Singh, T. & Singh, G.P.(1991b). Bianchi type V and VI₀ cosmological models in Lyra's geometry. *Astrophys. Space Sci.*, 182(2), 189-200
- Singh, T. & Singh, G.P.(1991c). Some cosmological models with constant deceleration parameter. *IL. Nuovo Cimento B*, 106(6), 617-622
- Singh, T. & Singh, G.P.(1992). Bianchi type III and Kantowski-Sachs cosmological models in Lyra's geometry. *Int. J. Theor. Phys.*, 31(8), 1433-1446
- Singh, T. & Singh, G.P.(1993). Lyra's geometry and cosmology: A review. *Fortschr Phys.*, 41(8), 737-764.
- Slipher, V.M.(1913). The radial velocity of the Andromeda Nebula. *Lowell Observatory Bull.*, 1, 56-57.

- Socorro, J. & Medina, E.R.(2000). Supersymmetric quantum mechanics for Bianchi class A models. *Phys. Rev. D.* 61, 087202
- Solanki, R., Pacif, S.K.J., Parida, A. & Sahoo, P.K.(2021). Cosmic acceleration with bulk viscosity in modified f (Q) gravity. *Phys. Dark Universe*, 32, 100820
- Soni, P. & Shrimali, S.(2015). String cosmological models in Bianchi type-III space-time with bulk viscosity an Λ term. *Int. J. Theo. Appl. Sci.*, 7(1), 1-5
- Spergel, D.N. et al.(2003). First-year Wilkinson microwave anisotropy probe (WMAP) observations : Determination of cosmological parameters. *Astrophys. J. Suppl.*, 148, 175-194
- Spergel, D.N. et al.(2007). Three-year Wilkinson microwave anisotropy probe (WMAP) observations:Implications for cosmology. *Astrophys. J. Suppl.*, 170, 377-408
- Stachel, J.(1980). Thickening the string. I. The string perfect dust. *Phys. Rev. D*, 21(8), 2171-2181
- Taub, A.H.(1951). Empty space-times admitting a three parameter group of motions. *Annals of Mathematics, Second Series*, 53(3), 472-490
- Tegmark, M. et al.(2004). Cosmological parameters from SDSS and WMAP. *Physical Rev. D*, 69(10), 103501.
- Thirukkanesh, S. & Maharaj, S.D.(2008). Charged anisotropic matter with a linear equation of state. *Class. Quantum Grav.*, 25, 235001
- Thorne, K.S.(1967). Primordial element formation, primordial magnetic fields and isotropy of the Universe. *Astrophysical J.*, 148, 51-68.
- Tiwari, R.K.(2010). Bianchi type-I cosmological models with perfect fluid in general relativity. *Res. Astron. Astrophys.*, 10(4), 291-300.
- Tiwari, R.K.(2011). Robertson-Walker cosmological models with perfect fluid in general relativity. *Res. Astron. Astrophys.*, 11(7), 767–775.
- Tiwari, L.K. & Kumar, A.(2021). Bianchi type-V bulk viscous Universe with constant deceleration parameter, *SEAJMMS*, 17(2), 355-366
- Tiwari, R.K., Shukla B.K. & Mishra S.(2019). Bianchi type-III string cosmological model in f(R,T) modified gravity theory. *Prepacetime J.* 10, 306-315.
- Tretyakov, P.V.(2021). Bianchi I cosmological solutions in teleparallel gravity. *arXiv:2109.14457v1 [gr-qc]* 29 Sep 2021

- Tripathi, B.R., Tyagi, A. & Parikh, S.(2017). Bianchi type-I inhomogeneous string cosmological model with electromagnetic field in general relativity. *Prespacetime J.*, 8(4), 474-483
- Trivedi, D. & Bhabor, A.K.(2021). A higher-dimensional LRS Bianchi type-V string cosmological model in Brans-Dicke scalar-tensor theory of gravitation. *Int. J. Math. Trends Techno.*, 67(2), 20-28
- Trivedi, T.S. & Shrimali, S.(2018). A decelerating anisotropic Bianchi type- VI₀ cosmological model in general relativity. *Prespacetime J.*, 9(4), 352-360
- Tyagi, A. & Sharma, K.(2010). Some Bianchi type-II bulk viscous string cosmological models in General Relativity. *Int. J. Theor. Phys.*, 49, 1712-1718
- Varela, V., Rahaman, F., Ray, S., Chakraborty, K. & Kalam, M.(2010). Charged anisotropic matter with linear or nonlinear equation of state. *Phys. Rev. D*, 82, 044052.
- Venkateswarlu, R. & Pavan Kumar, K.(2004). Higher dimensional string cosmologies in scale-covariant theory of gravitation. *Astrophys. Space Sci.*, 298, 403-408
- Venkateswarlu, R. & Satish, J.(2014). LRS Bianchi type-I inflationary string cosmological model in Brans-Dicke theory of gravitation. *J. Grav.*, 909374, 5 pages,
- Venkateswarlu, R. & Satish, J.(2014a). Kantowski-Sacks bulk viscous string cosmological models in the presence of zero-mass scalar fields. *Int. J. Theor. Phys.*, DOI 10.1007/s10773-013-1990-8
- Vilenkin, A. & Shellard, E.P.S.(1994). Cosmic strings and other topological defects. *Cambridge University Press, Cambridge*.
- Vilenkin, A.(1981). Cosmic strings. *Phys. Rev. D*, 24, 2082-2089
- Vilenkin, A.(1985). Cosmic string and domain walls. *Phys. Rept.*, 121(5), 263-315
- Vilenkin, A.(1981a). Gravitational field of vacuum domain walls and strings. *Phys. Rev. D*, 23(4), 852-857.
- Wang, X.X.(2005). Bianchi type-III string cosmological model with bulk viscosity in general relativity. *Chin. Phys. Lett.*, 22(1), 29-32.
- Wang, X.X.(2006). Bianchi type-III string cosmological model with bulk viscosity magnetic field. *Chin. Phys. Lett.*, 23(7), 1702--1704.
- Wang, X.X.(1991). Five dimensional Bianchi-V type perfect fluid cosmological models. *Chin. Astron. Astrophys.* 15(2), 234-238.

- Weinberg, S.(1971). Entropy generation and the survival of protogalaxies in an expanding Universe. *Astrophys. J.* 168, 175
- Weinberg, S.(1972). *Gravitation and Cosmology*. John Wiley & Sons, New York
- Weinberg, S.(1989). The cosmological constant. *Rev. Mod. Phys.*, 61(1), 1-23.
- Weyl, H.(1918). Sitzungsberichte Der Preussischen Akademie Der Wissenschaften. *Academy Wiss, Berlin*. 465.
- Yadav, A.K.(2010). Lyra's cosmology of inhomogeneous Universe with electromagnetic field. *Fizika B*, 19(2), 53-80
- Yadav, A.K. & Bhardwaj, V.K.(2018). Lyra's cosmology of hybrid Universe in Bianchi-V space-time. *RAA*,18(6), 64
- Yadav, A.K., Yadav, V.K. & Yadav, L.(2011). Bianchi type-V string cosmological models in general relativity. *Pramana J. Phys.*, 76(4), 681-690.
- Yadav, V.K. & Yadav, L.(2011). Bianchi type-III bulk viscous and barotropic perfect fluid cosmological models in Lyra's geometry. *Int. J. Theor. Phys.*, 50, 1382–1394
- Yadav, V.K., Yadav, L. & Yadav, A.K.(2010). Bianchi type-III anisotropic universes with a cloud of strings in Lyra's geometry. *Fizika B*. 19(1): 29-42.
- York, D.G. et al.(2000) The Sloan digital sky survey: technical summary. *The Astronomical J.*, 120(3), 1579-1587.
- Zel'dovich, Ya.B.(1980). Cosmological fluctuations produced near a singularity. *Mon. Not. R. Astron. Soc.*, 192(4), 663-667.
- Zeldovich, Ya.B., Kobzarev, I.Yu. & Okun L.B.(1974). Cosmological consequences of the spontaneous breakdown of discrete symmetry. *Zh. Eksp. Teor. Fiz.*, 67, 3-11.
- Zeyauddin, M., Zia, R. & Rao, C.V.(2020). Anisotropic Bianchi V cosmological model in scale covariant theory of gravitation with a time-variable deceleration parameter. *Heliyon*, 6,1-7
