

List of Publications

Conference Proceedings

1. M. Sharif and **M.Z. Bhatti**: *Some Inhomogeneity Factors in Self-gravitating Systems*, *Proc. Int. Conf. Relativ. Astrophys.* (2015)48 (**Punjab University Press**).
2. **M.Z. Bhatti**: *Role of Some Physical Factors on the Stability of Collapsing Systems*, *Math. Phys.* (2018)96 (**Proceedings of the 14th Regional Conference; World Scientific**).

List of Journal Publications (Indexed by ISI-JCR)

1. Z. Yousaf, M. Y. Khlopov, **M.Z. Bhatti** and T. Naseer: *Influence of Modification of Gravity on the Complexity Factor of Static Spherical Structures*, *Monthly Notices of the Royal Astronomical Society*, **495**(2020)4334 (**Oxford University Press**).
2. **M.Z. Bhatti** and Z. Tariq: *Effects of Electromagnetic Field on the Structure of Massive Compact Objects*, *Physics of the Dark Universe*, **29**(2020)100600 (**Elsevier**).
3. Z. Yousaf, **M.Z. Bhatti** and T. Naseer: *Measure of Complexity for Dynamical Self-gravitating Structures*, *International Journal of Modern Physics D*, **29**(2020)2050061 (**World Scientific**).
4. **M.Z. Bhatti**, Z. Yousaf and A. Khadim: *Dynamical Analysis of Self-gravitating Stars in Modified Gauss-Bonnet Gravity*, *Physical Review D*, **101**(2020)104029 (**American Physical Society**).
5. Z. Yousaf, **M.Z. Bhatti**, T. Naseer and I. Ahmad: *The measure of Complexity in Charged Celestial Bodies in $f(R, T, R_{\mu\nu}, T^{\mu\nu})$ Gravity*, *Physics of the Dark Universe*, **29**(2020)100581 (**Elsevier**).
6. Z. Yousaf, **M.Z. Bhatti** and K. Hassan: *Complexity for Self-gravitating Fluid Distributions in $f(G, T)$ gravity*, *European Physical Journal Plus*, **135**(2020)397 (**Springer**).
7. **M.Z. Bhatti**, Z. Yousaf and A. Rehman: *Gravastars in $f(R, G)$ Gravity*, *Physics of the Dark Universe*, **29**(2020)100561 (**Elsevier**).
8. Z. Yousaf, **M.Z. Bhatti** and T. Naseer: *New Definition of Complexity Factor in $f(R, T, R_{\mu\nu}, T^{\mu\nu})$ Gravity*, *Physics of the Dark Universe*, **28**(2020)535 (**Elsevier**).

9. Z. Yousaf, **M.Z. Bhatti** and T. Naseer: *Study of Static Charged Spherical Structure in $f(R, T, Q)$ Gravity*,
European Physical Journal Plus, **135**(2020)323 (**Springer**).
10. Z. Yousaf, **M. Z. Bhatti** and H. Asad, *Gravastars in $f(R, T, R_{\mu\nu}, T^{\mu\nu})$ Gravity*,
Physics of the Dark Universe, **28**(2020)100527 (**Elsevier**).
11. **M.Z. Bhatti**, Z. Yousaf and M. Yousaf, *Stability of Self-Gravitating Anisotropic Fluids in $f(R, T)$ Gravity*,
Physics of the Dark Universe, **28**(2020)100501 (**Elsevier**).
12. **M.Z. Bhatti** and Z. Tariq: *Electromagnetic Effects on Polytropes in $f(R)$ Gravity*,
Physics of the Dark Universe, **28**(2020)100482 (**Elsevier**).
13. **M.Z. Bhatti**, Z. Yousaf and M. Nawaz: *Spherical Collapse with Heat Dissipation in $f(R, T, R_{\nu\delta}, T^{\nu\delta})$ Gravity*,
International Journal of Geometric Methods in Modern Physics **17**(2020)2050017 (**World Scientific**).
14. **M.Z. Bhatti**: *Charged Gravastars with Cylindrical Spacetime*,
Modern Physics Letters A **33**(2020)2050069 (**World Scientific**).
15. Z. Yousaf, A. Ikram, M. Ilyas and **M.Z. Bhatti**, *Existence of Dynamical Wormholes in $f(R)$ Gravity*,
Canadian Journal of Physics, **98**(2020)474 (**NRS Research Press**).
16. **M.Z. Bhatti**, Z. Yousaf and Zarnoor: *Stability Analysis of Neutron Stars in Palatini $f(R, T)$ Gravity*,
General Relativity and Gravitation **51**(2019)144 (**Springer**).
17. **M.Z. Bhatti** and Z. Tariq: *Conformally Flat Polytropes in $f(R)$ Gravity*,
European Physical Journal Plus, **134**(2019)521 (**Springer**).
18. **M.Z. Bhatti**, K. Bamba, M. Nawaz and Z. Yousaf: *Dissipative Self-gravitating Systems in Modified Gravity*,
Journal of Cosmology and Astroparticle Physics, **09**(2019)011 (**IOP, UK**).
19. Z. Yousaf, **M.Z. Bhatti** and M.F. Malik: *Non-reversible Evolution of Tilted Szekeres Spacetimes with $f(R)$ Gravity*,
European Physical Journal Plus, **134**(2019)470 (**Springer**).
20. Z. Yousaf, K. Bamba, **M.Z. Bhatti** and U. Ghafoor: *Charged Gravastars in Modified Gravity*,
Physical Review D, **100**(2019)024062 (**American Physical Society**).
21. Z. Yousaf, **M.Z. Bhatti** and S. Yaseen: *Tilted Shear-free Axially Symmetric Fluids in $f(R)$ Gravity*,
European Physical Journal Plus, **134**(2019)487 (**Springer**).
22. **M.Z. Bhatti**, Z. Yousaf and Zarnoor: *Stability of Charged Neutron Star in Palatini $f(R)$ Gravity*,

- Modern Physics Letters A*, **33**(2019)1950252 (**World Scientific**).
23. **M.Z. Bhatti**, Z. Yousaf and M. Ajmal: *Locally Isotropic Gravastars with Cylindrical Spacetime*,
International Journal of Modern Physics D, **28**(2019)1950123 (**World Scientific**).
 24. M. Ilyas, Z. Yousaf and **M.Z. Bhatti**: *Bounds on Higher Derivative $f(R, \square R, T)$ Models from Energy Conditions*,
Modern Physics Letters A, **34**(2019)1950082 (**World Scientific**).
 25. Z. Yousaf, **M.Z. Bhatti** and R. Saleem: *Electromagnetic Field and Dark Dynamical Scalars for Spherical Systems*,
European Physical Journal Plus, **134**(2019)142 (**Springer**).
 26. **M.Z. Bhatti**, Z. Yousaf and A. Yousaf: *Energy Content of a Collapsing Sphere with $f(R)$ Gravity*,
International Journal of Geometric Methods in Modern Physics, **16**(2019)1950041 (**World Scientific**).
 27. **M.Z. Bhatti**, Z. Yousaf and A. Yousaf: *Tolman Mass of Spherical Fluids with Electromagnetic Field*,
Modern Physics Letters A, **34**(2019)1950012 (**World Scientific**).
 28. **M.Z. Bhatti**, Z. Yousaf and M. Ilyas: *Existence of Wormhole Solutions and Energy Conditions in $f(R, T)$ Gravity*,
Journal of Astrophysics and Astronomy, **39**(2018)69 (**Springer**).
 29. **M.Z. Bhatti**: *Stability of Celestial Objects and Adiabatic Index*,
European Physical Journal Plus, **133**(2018)431 (**Springer**).
 30. Z. Yousaf, K. Bamba, **M.Z. Bhatti** and Ume Farwa: *Dynamical Instability of Spherical Anisotropic Sources in $f(R, T, R_{\gamma\delta} T^{\gamma\delta})$ Gravity*,
European Physical Journal A, **54**(2018)122 (**Springer**).
 31. Z. Yousaf and **M.Z. Bhatti**: *Some Anisotropic Planar Stellar Models*,
International Journal of Geometric Methods in Modern Physics, **15**(2018)1850160 (**World Scientific**).
 32. Z. Yousaf, M. Sharif, M. Ilyas and **M.Z. Bhatti**: *Energy Conditions in Higher Derivative $f(R, \square R, T)$ Gravity*,
International Journal of Geometric Methods in Modern Physics, **15**(2018)1850146 (**World Scientific**).
 33. Z. Yousaf, **M.Z. Bhatti** and M. Ilyas: *Existence of Compact Structures in $f(R, T)$ Gravity*,
European Physical Journal C, **78**(2018)307 (**Springer**).
 34. **M.Z. Bhatti**, M. Sharif, Z. Yousaf and M. Ilyas: *Role of $f(G, T)$ Gravity on the Evolution of Relativistic Stars*,

- International Journal of Modern Physics D*, **27**(2018)1850044 (**World Scientific**).
35. M. Ilyas, Z. Yousaf, **M.Z. Bhatti** and B. Masud: *Existence of Relativistic Structures in $f(R,T)$ Gravity*, *Astrophysics and Space Science*, **362**(2017)237 (**Springer**).
 36. **M.Z. Bhatti** and Z. Yousaf: *Stability of Anisotropic Stellar Filaments*, *Annals of Physics*, **387**(2017)253 (**Elsevier**).
 37. Z. Yousaf, M. Sharif, M. Ilyas and **M.Z. Bhatti**: *Influence of $f(R)$ Models on the Existence of Anisotropic Self-Gravitating Systems*, *European Physical Journal C*, **77**(2017)691 (**Springer**).
 38. **M.Z. Bhatti**, Z. Yousaf and M. Ilyas: *Evolution of Compact Stars and Dark Dynamical Variables*, *European Physical Journal C*, **77**(2017)690 (**Springer**).
 39. Z. Yousaf, M. Ilyas and **M.Z. Bhatti**: *Influence of Modification of Gravity on Spherical Wormhole Models*, *Modern Physics Letters A*, **32**(2017)1750163 (**World Scientific**).
 40. K. Bamba, M. Ilyas, **M.Z. Bhatti** and Z. Yousaf: *Energy Conditions in Modified $f(G)$ Gravity*, *General Relativity and Gravitation*, **49**(2017)112 (**Springer**).
 41. **M.Z. Bhatti**, Z. Yousaf and Sara Ashraf: *Charged Black String Thin-Shell Wormholes in Modified Gravity*, *Annals of Physics*, **383**(2017)439 (**Elsevier**).
 42. Z. Yousaf, **M.Z. Bhatti** and Aamna Razaqat: *Evolution of Inhomogeneous LTB Geometry with Tilted Congruence and Modified Gravity*, *Canadian Journal of Physics*, **95**(2017)1246 (**NRS Research Press**).
 43. Z. Yousaf, **M.Z. Bhatti** and Ume Farwa: *Stability Analysis of Stellar Radiating Filaments*, *Classical and Quantum Gravity*, **34**(2017)145002 (**IOP, UK**).
 44. Z. Yousaf, **M.Z. Bhatti** and Ume Farwa: *Role of $f(R,T,R_{\nu\delta} T^{\nu\delta})$ Model on the Stability of Cylindrical Stellar Model*, *European Physical Journal C*, **77**(2017)359 (**Springer**).
 45. **M.Z. Bhatti**, A. Aslam and S. Ashraf: *Construction of Thin-Shell Wormholes from Metric $f(R)$ Gravity*, *Modern Physics Letters A*, **32**(2017)1750111 (**World Scientific**).
 46. Z. Yousaf, M. Ilyas and **M.Z. Bhatti**: *Static Spherical Wormhole Models in $f(R,T)$ Gravity*, *European Physical Journal Plus*, **132**(2017)268 (**Springer**).
 47. **M.Z. Bhatti**, Z. Yousaf and Sonia Hanif: *Gravitational Collapse in Generalized Teleparallel Gravity*, *European Physical Journal Plus*, **132**(2017)230 (**Springer**).
 48. **M.Z. Bhatti**, Z. Yousaf and Sonia Hanif: *Role of $f(T)$ Gravity on the Evolution of Collapsing*

- Stellar Model,*
Physics of the Dark Universe, 16(2017)34 (Elsevier).
49. Z. Yousaf, **M.Z. Bhatti** and Aamna Razaqat: *Electromagnetic Effects on the Evolution of LTB Geometry in Modified Gravity,*
Astrophysics and Space Science, 362(2017)68 (Springer).
 50. Z. Yousaf, **M.Z. Bhatti** and Aamna Razaqat: *LTB Geometry with Tilted and Non-Tilted Congruences in $f(R, T)$ Gravity,*
International Journal of Modern Physics D, 26(2017)1750099 (World Scientific).
 51. **M.Z. Bhatti**, Z. Yousaf and Sonia Hanif: *Stability of Anisotropic Compact Objects in $f(T)$ Gravity,*
Modern Physics Letters A, 32(2017)1750042 (World Scientific).
 52. Z. Yousaf, K. Bamba and **M.Z. Bhatti**: *Role of Tilted Congruence and $f(R)$ Gravity on Regular Compact Objects,*
Physical Review D, 95(2017)024024 (American Physical Society).
 53. Z. Yousaf, **M.Z. Bhatti** and Ume Farwa: *Stability of Compact Stars in $\alpha R^2 + \beta(R_{\gamma\delta} T^{\gamma\delta})$ Gravity,*
Monthly Notices of the Royal Astronomical Society, 464(2017)4509 (Oxford University Press).
 54. **M.Z. Bhatti** and Z. Yousaf: *Gravitational Collapse and Dark Universe with LTB Geometry,*
International Journal of Modern Physics D, 26(2017)1750045 (World Scientific).
 55. **M.Z. Bhatti** and Z. Yousaf: *Dynamical Variables and Evolution of the Universe,*
International Journal of Modern Physics D, 26(2017)1750029 (World Scientific).
 56. **M.Z. Bhatti**, *Shear-Free Stellar Solutions in Λ -Dominated Era,*
European Physical Journal Plus, 131(2016)428 (Springer).
 57. Z. Yousaf, K. Bamba and **M.Z. Bhatti**: *Causes of Irregular Energy Density in $f(R, T)$ Gravity,*
Physical Review D, 93(2016)124048 (American Physical Society).
 58. M. Sharif and **M.Z. Bhatti**: *Binding Energy in Self-gravitating Charged Plane Symmetric Systems,*
Chinese Journal of Physics, 54(2016)451 (Elsevier).
 59. Z. Yousaf and **M.Z. Bhatti**: *Cavity Evolution and Instability Constraints of Relativistic Interiors,*
European Physical Journal C, 76(2016)267 (Springer).
 60. **M.Z. Bhatti** and Z. Yousaf: *Influence of Electric Charge and Modified Gravity on Density Irregularities,*
European Physical Journal C, 76(2016)219 (Springer).
 61. Z. Yousaf, K. Bamba and **M.Z. Bhatti**: *Influence of Modification of Gravity on the Dynamics of Radiating Spherical Fluids,*

- Physical Review D*, **93**(2016)064059 (**American Physical Society**).
62. Z. Yousaf and **M.Z. Bhatti**: *Electromagnetic Field and Cylindrical Compact Objects in Modified Gravity*,
Monthly Notices of the Royal Astronomical Society, **458**(2016)1785 (**Oxford University Press**).
 63. M. Sharif and **M.Z. Bhatti**: *Stability Analysis of Axial Reflection Symmetric Spacetime*,
Monthly Notices of the Royal Astronomical Society, **455**(2016)1015 (**Oxford University Press**).
 64. M. Sharif and **M.Z. Bhatti**: *Role of Bulk Viscosity and Electromagnetic Field on the Stability of Collapsing Cylinder*,
International Journal of Theoretical Physics, **54**(2015)2921 (**Springer**).
 65. M. Sharif and **M.Z. Bhatti**: *Dynamics of Charged Planar Geometry in Tilted and Non-Tilted Frames*,
Journal of Experimental and Theoretical Physics, **120**(2015)813 (**Springer**).
 66. M. Sharif and **M.Z. Bhatti**: *Structure Scalars and Super-Poynting Vector of Tilted Szekeres Geometry*,
International Journal of Modern Physics D, **24**(2015)1550014 (**World Scientific**).
 67. M. Sharif and **M.Z. Bhatti**: *Stability Analysis of Expansion-free Charged Planar Geometry*,
Astrophysics and Space Science, **355**(2015)389 (**Springer**).
 68. M. Sharif and **M.Z. Bhatti**: *Dynamics and Stability of Charged Spherical Star with Tilted and Non-Tilted Congruences*,
Modern Physics Letters A, **29**(2014)1450165 (**World Scientific**).
 69. M. Sharif and **M.Z. Bhatti**: *Effects of Some Physical Factors on the Stability of Collapsing Stars*,
International Journal of Modern Physics D, **23**(2014)1450085 (**World Scientific**).
 70. M. Sharif and **M.Z. Bhatti**: *Electromagnetic Effects on the Inhomogeneity of Planar Symmetry*,
Modern Physics Letters A, **29**(2014) 1450129 (**World Scientific**).
 71. M. Sharif and **M.Z. Bhatti**: *Effects of Some Physical Factors on the Inhomogeneity in Planar Symmetry*,
Modern Physics Letters A, **29**(2014)1450094 (**World Scientific**).
 72. M. Sharif and **M.Z. Bhatti**: *Radiating Collapsing Relativistic Models*,
Physica Scripta, **89**(2014)084004 (**IOP, UK**).
 73. M. Sharif and **M.Z. Bhatti**: *Shearfree and Cavity Models with Plane Symmetry*,
Astrophysics and Space Science, **352**(2014)883 (**Springer**).
 74. M. Sharif and **M.Z. Bhatti**: *On the Stability of a Class of Radiating Viscous Self-Gravitating Stars with Axial Symmetry*,
Astroparticle Physics, **56**(2014)35 (**Elsevier**).

75. M. Sharif and **M.Z. Bhatti**: *Stability of the Charged Radiating Cylinder*, *Physics Letters A*, **378**(2014)469 (**Elsevier**).
76. M. Sharif and **M.Z. Bhatti**: *Charged Static Axial Symmetric Solutions and Scalar Structures*, *Astrophysics and Space Science*, **349**(2014)995 (**Springer**).
77. M. Sharif and **M.Z. Bhatti**: *Stability Analysis of Restricted Non-Static Axial-Symmetry*, *Journal of Cosmology and Astroparticle Physics*, **11**(2013)014 (**IOP, UK**).
78. M. Sharif and **M.Z. Bhatti**: *Stability of the Expansion-free Charged Cylinder*, *Journal of Cosmology and Astroparticle Physics*, **10**(2013)056 (**IOP, UK**).
79. M. Sharif and **M.Z. Bhatti**: *Effects of Electromagnetic Field on Shearfree Spherical Collapse*, *Astrophysics and Space Science*, **347**(2013)337 (**Springer**).
80. M. Sharif and **M.Z. Bhatti**: *Gravitational Binding Energy in Charged Cylindrical Symmetry*, *Canadian Journal of Physics*, **90**(2012)1233 (**NRS Research Press**).
81. M. Sharif and **M.Z. Bhatti**: *Structure Scalars in Charged Plane Symmetry*, *Modern Physics Letters A*, **27**(2012)1250141 (**World Scientific**).
82. M. Sharif and **M.Z. Bhatti**: *Structure Scalars for Charged Cylindrically Symmetric Relativistic Fluids*, *General Relativity and Gravitation*, **44**(2012)2811 (**Springer**).