

Research Publications of Department of Mathematics from 2017-2021

No. of International and National Publications: 90

Details of Publications

Year 2017:

1. D. Ranadheer, D. Rajaiah, P. Malla Reddy, Block traingular and skew symmetric splitting method for steady state vector of linear system of eragodic block circulantmarkov chains, Int. Journal of Computing Science and Mathematics, Inder Science Publishers, Vol. 8, 4, 2017.
2. G. Ravi Kumar, L.P. Raj Kumar, P. Malla Reddy, Loss behavior analysis of asynchronous internet router under self-similar traffic input using MMPP/PH/C/K queueing system employing PBS method, Int. J. Communication Networks and Distributed Systems, Vol. 19,3, pp. 257-269, 2017.
3. G. Ravi Kumar, Malla Reddy Perati, Loss behavior internet router with priority based selfsimilar synchronous traffic –Multi server queueing system with Markovian input, Published online before print, OPSEARCH, Springer, Vol..54, 2, pp. 283-305, 2017.
4. RajaihDasari, Raj Kumar L.P. Malla Reddy Perati, Steady state probability vector of positive definite regularized linear systems of circulant stochastic matrices, Linear and Multilinear Algebra, Taylor and Francis, Vol. 65, 1, pp, 140-155, 2017.
5. R.B.Sharma and B.Ravindar, On a Subclass of Harmonic Univalent Functions defined by Convolution and Integral Convolution, International Journal of Pure and Applied Mathematics, Volume 117 No. 7, 2017, 135-145.
6. R.B.Sharma and K.Rajyalaxmi, Second Hankel Determinants for Some Subclasses of Bi univalent Functions Associated with Pseudo-Starlike Functions, Hindawi , Journal of Complex Analysis, Vol. 2017, Article ID 6476391, 9 pages(Scopus)

7. R.B.Sharma, K.Ganesh and K.Rajyalaxmi, Sandwich Type of Results for a Subclass of Pi-Like Functions, International Journal of Pure and Applied Mathematics, Vol.117, no.12(2017), pp.45-54.(Scopus).
8. R.B.Sharma and K.Ganesh, Sandwich Type of Results for ϕ -like Functions using Subordination, International Journal of Mathematics Trends and Technology (IJMTT) – Volume 49 Number 4 September 2017.
9. R.B.Sharma and M.HariPriya, Coefficient Inequalities for Transforms of Analytic Functions through Generalized Differential Operator, Palestine Journal of Mathematics, Vol.6(Special issue-II), (2017),pp.231-240.ISSN: 2219-5688.(UGC Approved Journal No. 48859).
10. R.B.Sharma & M.HariPriya, On a class of α -convex functions subordinate to a shell shaped region, The Journal of Analysis, Vol.1,(2017),pp.1-13.(Springer) (UGC Approved Journal, No.45575).
11. P.Ashok, N.Swathi, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability of time dependent stress strength system which follow different distributions when the number of cycles follows binomial distribution, International Journal of Mathematical Archieve, 8(11), ISSN No.2229-5046, pp:213-217, 2017.
12. T.Sumathi Uma Maheswari, N.Swathi, M.Tirumala Devi, P.Ashok, Reliability analysis of time dependent stress strength system when the number of cycles follows binomial distribution, International Journal of Statistics and Systems, ISSN No.0973-2675, Vol 12, pp: 575-583, Research India Publications, 2017.
13. K. Somaiah., “Effect of rotation on Radial Vibrations in an Unbounded Micro-isotropic, Micro- elastic Solid having a spherical cavity.” “Palastine Journal of Mathematics,” Vol. 6(1), pp.15-23, (2017).
14. K. Somaiah.“Radial Vibrations Due the Effect of Gravity in a Microplar Elastic Medium having a Spherical Cavity.” “Asian Journal of Mathematics and Computer Research” Vol.16(1): pp. 19-26, 2017. ISSN: 2395-4205 (P), ISSN: 2395-4213 (O).

15. K. Somaiah, "Propagation of Plane Waves in Micro-stretch Elastic solid in special case," "Global Journal of Pure and Applied Mathematics," Vol.13, No.6, 2017, pp.2143- 2151. Research India, Publications.
16. T. Nagaiah & **L. Bhaskar** & T. Srinivas, Fuzzy ideal of Partially Ordered Near-Ring – International Journal of Scientific and Innovative Mathematical Research (IJSIMR) Volume 5(8), 2017, pp.8-14, ISSN: 2347-3142.(**UGC Care listed**)
17. **L. Bhaskar**, P. Narasimha Swamy & T. Srinivas, Some Results on an Anti Vague Field-International Journal of Pure and Applied Mathematics (IJPAM), Volume 117, No. 13, December 2017, PP 127-133, ISSN:1314-3395.(**Scopus**)

Year 2018:

18. Sandhya Rani B, AnadRao J, Malla Reddy P, Study of radial vibrations in an infinitely long fluid-filled transversely isotropic thick-walled hollow composite poroelastic cylinders, Journal of Theoretical and Applied Mechanics, Sofia, Vol. 48, No. 3, pp. 31-44, 2018.
19. Rajitha G, Radhika B, Malla Reddy P, SrihariRao A., Effect of elastic foundation on thick-walled hollow poroelastic spherical shell, International Journal of Pure and Applied Mathematics, Vol. 118 (20), pp. 4627-4635, 2018.
20. Ch. Balu, G. Rajitha, M. Ramesh, P. M. Reddy, Shear wave propagation in magneto-poroelastic dissipative isotropic medium sandwiched between two poroelastic half-spaces, International Journal of Pure and Applied Mathematics, Vol. 118, No. 20. pp. 4645-4656, 2018.
21. Rajitha Gurijala, Malla Reddy Perati, Analysis of radial vibrations in thick walled hollow poroelastic cylinder in the framework of Biot's extension theory, Multidiscipline Modeling in Materials and Structures, Vol. 14, Issue 5, pp. 970-983, 2018.

22. Malla Reddy Perati, Ravi Kumar Gudimalla, Performance analysis of asynchronous priority –based internet router under self-similar traffic input-queueing system with Markovian input and hyper-exponential services, International Journal of Operation Research, Inderscience, Accepted for publication, 2018.
23. Malla Reddy P., Ramesh R., Rajaiah D., Raj Kumar L.P., Ramana Murthy M.V., Convergence analysis of modified triangular and triangular splitting method for the solution of regularized linear system-circulant matrices, International Journal of Applied Engineering Research, 13, 9, pp. 6751–6759,2018.
24. R.B.Sharma and K.RajyaLaxmi, Second Hankel Determinants and Fekete-Szego Inequalities for some sub-classes of Bi-Univalent Functions with respect to symmetric and conjugate points related to a Shell Shaped Region, Analysis in Theory and Applications, Vol.34(2)(2018), 358-373.
25. R.B.Sharma, M.HariPriya and V.Suman Kumar, K^{th} root transformation for a subclass of Log-Sigmoid analytic function based on quasi-subordination, International Journal of Engineering and Technology, Vol.7(4.10), 2018, 1007-1010.
26. R.B.Sharma and B. Ravindar, On a Subclass of Harmonic Univalent functions Associated with the Differential Operator, International Journal of Engineering and Technology, Vol. 7 (3.3) (2018), 146-151.
27. R.B.Sharma , K.Rajyalaxmi and M.HariPriya, Upper Bound of Second Hankel Determinants for Certain Subclasses of Bi-univalent Functions Using Subordination, IOP Conf. Series: Journal of Physics-- Conf. Series 1000 (2018) 012093, doi :10.1088/1742-6596/1000/1/012093.
28. R.B.Sharma&M.HariPriya , On a Class of Bounded Turning Functions Subordinate to a Leaf-Like Domain, IOP Conf. Series: Journal of Physics: Conf. Series 1000 (2018) 012056 doi :10.1088/1742-6596/1000/1/012056.

29. R.B.Sharma and B.Ravindar, On a subclass of harmonic univalent functions, IOP Conf. Series: Journal of Physics: Conf. Series 1000 (2018) 012115 doi :10.1088/1742-6596/1000/1/012115.
30. P.Ashok, N.Swathi, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability of multi component system using pareto distribution, International Journal of Mathematics Trends and Technology, ISSN No.2231-5373, Vol 64, No.2, 2018.
31. P.Hari Prasad, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability analysis of structural beam section using first order reliability method, International Journal of Scientific Research in Science and Technology, ISSN No.2395-6011, Vol 4, iss 5, March 2018.
32. P.Ashok, N.Swathi, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability of a multi component system using strength and stress mixture of two exponential and lindley distribution, International Journal of Pure and Applied Mathematics, ISSN No.1314-3195, Vol 119, No.15, pp: 1357-1367, 2018.
33. K. Somaiah., “ Plane Wave Propagation in a rotating Micropolar Micro-stretch Elastic Solid in Special Case, Applications of Fluid Dynamics, https://doi.org/10.1007/987-981-10-5329-0_50, 2018, pp. 661-672. Springer Publications, Scopus Indexed.
34. K. Somaiah., and R. Srinivas “Radial Vibrations in an Unbounded Micropolar elastic solid having a Fluid Loaded Spherical Cavity,” Applications of Fluid Dynamics,https://doi.org/10.1007/987-981-10-5329-0_31.2018, pp. 431-438, Springer Publications, Scopus Indexed.
35. **L. Bhaskar**, T. Nagaiah, P. Narasimha Swamy & T. Srinivas, Sum of Vague Ideal of Gamma Near-ring-International Journal of Engineering & Technology, Vol.7(4.10), 2018, pp. 4-9, ISSN: 2227-524X, DOI: 10.14419/ijet.v7i4.10.20693. (**Scopus**)
36. P. Narasimha Swamy, K. Vijay Kumar, **L. Bhaskar** & T. Srinivas, Fuzzy Gamma Near-Algebra Over Fuzzy Field-International Journal of Pure and Applied Mathematics (IJPAM), Volume 118, No. 1, February

2018, PP 95-103, ISSN:1314-3395. **(Scopus)**

37. **L. Bhaskar**, P. Narasimha Swamy & T. Srinivas, A Note on Vague Ideal of a Near-Algebra-International Journal of Creative Research Thought (IJCRT), Vol.6, Issue-2, April 2018, PP 245-250, ISSN: 2320-2882. **(UGC Care listed)**

38. T. Nagaiah, **L. Bhaskar** & T. Srinivas, T-Fuzzy Ideal of Partially Ordered Near-Ring-International Journal of Pure and Applied Mathematics (IJPAM), Volume 120, No. 7, 2018, PP. 175-183, ISSN:1314-3395. **(Scopus)**

Year 2019:

39. Malla Reddy P, Sindhuja A, Rajitha G., Study of reflection and transmission of axially symmetric body waves incident on a base of semi-infinite poroelastic solid cylinder, *Archieve of Applied Mechanics*, Vol. 89(12), pp. 2507-2517, 2019.

40. B. Sandhya Rani, J. AnandRao, P. Malla Reddy, Axially symmetric vibrations of a liquid-filled poroelastic thin cylinder saturated with two immiscible liquids surrounded by a liquid, *Journal of Solid Mechanics*, Vol. 11(2), pp. 272-280, 2019.

41. Ch. Balu, B. Sandhya Rani, M. Ramesh, P. Malla Reddy, Study of torsional vibrations in poroelastic dissipative thick-walled hollow cylinder in the presence of an initial stress, accepted for *Special Topics and Reviews in Porous Media*, 10 (5), pp.447-456, 2019.

42. T.Sumathi Uma Maheswari, M.Tirumala Devi, Reliability analysis of resultant stress for unsymmetrical columns for stress follow exponential distribution, *International Journal of Engineering and Advanced Technology*, ISSN No.2249-8958, Vol. 8, iss 6S3, September 2019.

43. T.Sumathi Uma Maheswari, M.Tirumala Devi, Research on stress strength model under random repeated cycles, International Journal of Innovative Technology and Exploring Engineering, ISSN No.2278-3075, Vol 8, July 2019.
44. P.Ashok, N.Swathi, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability of time dependent stress strength system for finite mixture of exponential and pareto distribution under different cycles, Journal of Physics- Conference Series, 2019.
45. P.Ashok, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability of a cascade system of type($X<Y<Z$) for pareto and weibull distributions, AIP Conference Proceedings, 2019.
46. T.Sumathi Uma Maheswari, J.Saritha, M.Tirumala Devi, Reliability Analysis of n component system using markovian model, Journal of Engineering Technology and Innovative Research, ISSN No.2349-5162, Vol 6, iss 6, pp:296-299, 2019
47. P.Ashok, N.Swathi, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability of a multi component system using mixture of two weibull distributions, International Journal of Recent Technology and Engineering, ISSN No.2277-3878, Vol 7, iss 5S2, January 2019.
48. **L. Bhaskar**, P. Narasimha Swamy and T. Srinivas, Sum of vague ideals of near rings, AIP Conference Proceedings , Vol.2177(1), (2019), DOI no: 10.1063/1.5135192.
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49. Rajitha G, Malla Reddy P., Study of radial vibrations in thick walled hollow dissipative poroelastic spherical shell on elastic foundation, Materials Physics and Mechanics, Vol. 44, pp. 411-422, 2020.

50. Rajitha G, Malla Reddy P., Study of torsional vibrations of composite poroelastic spherical shell-Biot's extension theory, *Journal of Solid Mechanics*, Vol. 12(3), pp. 649-662, 2020.
51. Sindhuja A, Rajitha G. Malla Reddy P., Shear wave propagation in magneto poroelastic medium sandwiched between self-reinforced poroelastic medium and poroelastic half space, *Engineering Computations*, DOI 10.1108/EC-11-2019-0505, 2020.
52. Poonem Latha Madhuri., Rajitha Gurijala., Malla Reddy Perati., Study of vibrations in viscoporoelastic cylinder over a initially stressed heterogeneous layer, *AIP Conference Proceedings*, 2020, [https:// doi. Org/ 10. 1063/ 5. 0014980](https://doi.org/10.1063/5.0014980).
53. Rajitha Gurijala., Poonem Latha Madhuri., Malla Reddy Perati., Study of waves in piezoelectric heterogeneous poroelastic layer over an initially stressed heterogeneous poroelastic half space, *IOSR Journal of Engineering*, Vol. 10(2)., pp. 53-58, 2020.
54. R.Bharavi Sharma, V.Suman Kumar, Zalcman conjecture and Hankel determinant of order three for starlike and convex functions associated with shell-like curves— *ProblemyAnnales Issues of Analysis*, 9(2020), no.2, pp 119-137.
55. R.Bharavi Sharma, V.Suman Kumar, A study on Zalcman conjecture and third Hankel determinant, *IOP Conf. Series: Journal of Physics-- Conf. Series 1597 (2020) 012021* doi:10.1088/1742-6596/1597/1/012021
56. R.B.Sharma, SumalathaPulala and M.HariPriya, Third Hankel determinant for the Bounded turning functions subordinate to k-Fibonacci sequence, *IOP Conf. Series: Journal of Physics--Conf. Series 1597 (2020) 012030* IOP Publishing doi:10.1088/1742-6596/1597/1/012030
57. R.B.Sharma and B. Ravindar, Estimation of coefficients for a novel subclasses of harmonic mappings, *Material Science and Engineering*, 981, 022088 (2020).

58. R.B.Sharma, Ganesh Koride and RajyaLaxmiKalikota, Third Hankel determinant for a class of Functions with respect to symmetric points associated with exponential function, vol. 19, no. 13, (2020), pp.133-138. DOI: 10.37394/23206.2020.19.13, WSEAS TRANSACTIONS on MATHEMATICS.
59. T. Sumathi Uma Maheswari and M. Tirumala Devi, Reliability analysis of m-modular redundancy system using markovian technique, Journal of Xian University of Architecture and Technology, 1006-7930, Scopus, 2725-2728, 2020.
60. G.Saritha, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability model for 4-modular and 5-modular redundancy system by using markov technique, Advances in Intelligent Systems and Computing, Springer Link, pp:329-338, April 2020
61. A.Sathyanarayana, T.Sumathi Uma Maheswari, M.Tirumala Devi, Reliability analysis over I - Section of beam due to uniform distribution of load, International Journal Performability Engineering, Vol 16, No.3, pp:333-341, March 2020
62. T.Sumathi Uma Maheswari, M.Tirumala Devi, Reliability analysis of m-modular redundancy system using markovian technique, Journal of Xian University of Architecture and Technology, ISSN No.1006-7930, Vol XII, iss v, pp:2725-2728, 2020
63. A.Sathyanarayana, T.Sumathi Uma Maheswari, M.Tirumala Devi, Reliability of simply supported rectangular beam under uniformly distributed load, Journal of Xian University of Architecture and Technology, ISSN No.1006-7930, Vol XII, iss V, pp:2678-2684, 2020
64. K.Sandhya Rani, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability estimation for n independent stresses based on exponential and pareto distribution, Journal of Xian University of Architecture and Technology, ISSN No.1006-7930, Vol XII, iss v, pp:2627-2634, 2020
65. K.Sandhya Rani, P.Ashok, M.Tirumala Devi, T.Sumathi Uma Maheswari, Reliability estimation of time dependent stress strength system for different distributions,

International Journal of Advanced Science and Technology, ISSN No.2005-4238, Vol 29, No.3, pp:6571-6577, 2020.

66. K. Somaiah., “Investigation of Inhomogeneous and Attenuation Wave Propagation in a Micropolar Elastic Medium, “International Journal of Multidisciplinary Educational Educational Research,” " ISSN: 2277-7881, UGCApproved, Vol. 9, Issue 2 (1), Feb2020, pp.153-163.
67. K. Somaiah, and A. Ravi Kumar, “Studies of Radial Vibrations in a Non-homogeneous Orthotropic Hollow Solid Cylinder under the Gravity Field,” "Journal of Xi'an University of Architecture and Technology" ISSN No : 1006-7930, Volume XII, Issue V, 2020, pp.2702-2708. Scopus Indexed.
68. K. Somaiah, and A. Chandual, “Studies of Rotation Effect on Inhomogeneous and Attenuation Wave Propagation in a Micropolar Elastic Solid,” AIP Conf. Proc. 2246, 020010-1–020010-11; <https://doi.org/10.1063/5.0014536>. Published by AIP Publishing. 978-0-7354-2005-2/\$30. 28th, July-2020. Scopus Indexed.
69. A. Chandual, and K. Somaiah, “Rayleigh Waves In An Incompressible Non-Local Elastic Medium Under Gravity Effect” AIP Conf.Proc. 2246,020011-1–020014-5; <https://doi.org/10.1063/5.0014555>. Published by AIP Publishing. 978-0-7354- 2005-2/\$30. 28th, July-2020. Scopus Indexed.
70. C. Saraswathi, P. Narasimha Swamy and **L. Bhaskar**, Interval Valued anti Fuzzy Near Algebra over Interval Valued anti fuzzy field, Advances in Mathematics: Scientific Journal, 9(11), 2020, pp.9129-9136, ISSN: 1857-8365. **(Scopus)**
71. **L. Bhaskar**, P. Narasimha Swamy and T. Srinivas, Anti Vague Near Algebra over Anti Vague Field, AIP Conference Proceedings, Vol.2246, 020080-88(2020), ISSN: 1551-7616. **(Scopus)**
72. C. Saraswathi, P. Narasimha Swamy and **L. Bhaskar**, Interval valued fuzzy ideals of near algebras, Malaya Journal of Matematik, Vol. S(1), p. 177-182, 2020. **(UGC Care listed.**

73. C. Saraswathi, P. Narasimha Swamy, K. Vijay Kumar and **L. Bhaskar** Bipolar Fuzzy Gamma Near Algebra Over Bipolar Fuzzy Field, AIP Conference Proceedings, Vol.2246(1), pp.20017-20026, (2020). (**Scopus**)

Year 2021:

74. Poonem Latha Madhuri., Rajitha Gurijala., Sindhuja Ala., Malla Reddy Perati., Initial stress and heterogeneity effects on torsional waves in dry sand half space between reinforced half space and poroelastic medium, Engineering Computations, DOI. Org/10.11.1108/EC-04-2021-2021.

75. RadhikaBiragoni., BaluChandavath., Malla Reddy Perati., SrihariRaoApparusu., Investigation of torsional wave propagation in sandwiched magneto- poroelastic dissipative transversely isotropic medium, Advances and Applications in Mathematical Sciences, Vol. 20(9), pp. 2393- 2418, 2021.

76. Venugopal M., Rajitha G., Malla Reddy P., G- type wave propagation in an initially stressed fluid saturated viscoporoelastic layer lying over heterogeneous poroelastic half space, Mechanics of Solids, DOI: 10.3103/S0025654422010150.

77. Venugopal M., Rajitha G., Malla Reddy P., G- type wave propagation in an initially stressed fluid saturated viscoporoelastic layer lying over heterogeneous poroelastic half space, Mechanics of Solids, DOI: 10.3103/S0025654422010150.

78. Venkanna D., Venugopal M., Malla Reddy P., Study of axially symmetric waves in double porosity borehole containing fluid, Mechanics of Solids, Published online before print, DOI: 10.3103/S002565442202011X.

79. Venkanna D., Malla Reddy P., Propagation of vibrations in a plane angular sector of double porosity elliptic cone, International Journal of Applied and Computational Mathematics, DOI:10.1007/s40819-021-01239-4.

80. Venkanna D., Malla Reddy P., Study of symmetrical and anti- symmetrical edge waves in double porosity semi-infinite thin plate- plane stress problem, *Mechanics of Solids* (Accepted).
81. Venkanna D., Malla Reddy P., Study of normal stresses in double porosity bore, *South East Asian Journal of Mathematics and Mathematical Sciences* (Accepted).
82. Venugopal M., Malla Reddy P., Transference of Love wave in orthotropic stratum resting on heterogeneous poroelastic half space in presence of initial stress, *South East Asian Journal of Mathematics and Mathematical Sciences* (Accepted).
83. AbhilashVollala., Malla Reddy Perati., Fitting model for self- similar traffic- time dependent Markovian process and second order statistics, *Statistics and Applications* (Accepted).
84. G. Saritha, M. Tirumala Devi and T. Sumathi Uma Maheswari, Availability measures for 4-component system using Markov process, *International journal of advanced trends in computer science and engineering*, 2278-3091, Scopus, 340-344, Feb 2021.
85. K.Somaiah, " Effect of Rotation and Fluid on Radial Vibrations in a Micropolar Elastic Solid Having a Fluid-Loaded Spherical Cavity," *Advances in Fluid Dynamics, Lecture Notes in Mechanical Engineering*, https://doi.org/10.1007/978-981-15-4308-1_13, Springer Nature Singapore Pte Ltd. 2021, pp.171-180. Scopus Indexed.
86. K. Somaiah, and A. Ravi Kumar " Investigation of Plane Longitudinal Waves in a Micro-isotropic, Micro-Elastic Solid ",*J. Math. Comput. Sci.*11 (2021), No.1,pp. 380-391, ISSN:1927-5307 <https://doi.org/10.28919/jmcs/5124>, Available online at <http://scik.org>. Scopus Indexed.
87. E. Rama , K. Somaiah and K. Sambaiah, "A study of Variational Iteration Method for Solving Various Types of Problems" *Malaya Journal of Matematik*, Vol. 9, No. 1, pp.701-708, (2021), <https://doi.org/10.26637/MJM0901/0123>. UGC Approved.

88. K. Somaiah, "S-Laplace Transform with Order (α, β) of Some Fundamental Functions", Journal of Xi'an University of Architecture & Technology, Volume XIII, Issue 11, (2021), ISSN No :1006-7930, pp.75-83 Scopus Indexed.
89. K. Somaiah, and A. Ravi Kumar " Rayleigh Type Wave Propagation in a Rotating Micropolar Elastic Solid With Stretch in the Gravity Field " Advances and Applications in Mathematical Sciences Volume 20, Issue 12, (2021), Pages: 3397-3412 © 2021 Mili Publications. UGC Approved.
90. **L. Bhaskar**, A.K.S. Chandra Shekar Rao & T. Srinivas, Some Theorems on SS-Elements of a Ring- Palestine Journal of Mathematics. **(Accepted) (Scopus) 2021.**