

**JOURNAL ARTICLES 2020-2021**

1. Mondal S., Kundu D., A bivariate inverse Weibull distribution and its application in complementary risks model: *Journal of Applied Statistics*, Vol- 47, 1084-1108 (2020)
2. Mandal A., Mishra S.K., Deformation of hom-Lie-Rinehart algebras: *Communications in Algebra*, Vol- 48, 1653-1670 (2020)
3. Ecevit F., Anand A., Boubendir Y., Galerkin Boundary Element Methods for High-Frequency Multiple-Scattering Problems: *Journal of Scientific Computing*, Vol- 83, - (2020)
4. Ghosh A., Shrivastava S., Shuin K., Weighted boundedness of multilinear maximal function using Dirac deltas: *Rendiconti del Circolo Matematico di Palermo*, Vol- 69, 273-285 (2020)
5. Chowdhury M., Kumar B.V.R., On subgrid multiscale stabilized finite element method for advection-diffusion-reaction equation with variable coefficients: *Applied Numerical Mathematics*, Vol- 150, 576-586 (2020)
6. Paul A.K., Sen D., An upper bound for higher topological complexity and higher strongly equivariant complexity: *Topology and its Applications*, Vol- 277, - (2020)
7. Sen D., Petrovskii S., Ghorai S., Banerjee M., Rich Bifurcation Structure of Prey-Predator Model Induced by the Allee Effect in the Growth of Generalist Predator: *International Journal of Bifurcation and Chaos*, Vol- 30, - (2020)
8. Manna K., Pal S., Banerjee M., Analytical and numerical detection of traveling wave and wave-train solutions in a prey-predator model with weak Allee effect: *Nonlinear Dynamics*, Vol- 100, 2989-3006 (2020)
9. Panicker G., Krishna K.V., Bhaduri P., On the structure of C-algebras through atomicity and if-then-else: *Algebra Universalis*, Vol- 81, - (2020)
10. d'Onofrio A., Banerjee M., Manfredi P., Spatial behavioural responses to the spread of an infectious disease can suppress Turing and Turing-Hopf patterning of the disease: *Physica A: Statistical Mechanics and its Applications*, Vol- 545, - (2020)

11. Halim A., Kumar B.V.R., An anisotropic PDE model for image inpainting: Computers and Mathematics with Applications, Vol- 79, 2701-2721 (2020)
12. Bal K., Garain P., Multiplicity of Solution for a Quasilinear Equation with Singular Nonlinearity: Mediterranean Journal of Mathematics, Vol- 17, - (2020)
13. Ramesh V.P., Kadalbajoo M.K., Prithvi M., Priyanga B., Exponentially Refined Mesh for Singularly Perturbed Interior Layer Problem: International Journal of Applied and Computational Mathematics, Vol- 6, - (2020)
14. Bhar S., Bhaskaran R., Sarkar B., Solutions of SPDE's Associated with a Stochastic Flow: Potential Analysis, Vol- 53, 203-221 (2020)
15. Gupta R., Kumar S., Trivedi S., Unitary equivalence of operator-valued multishifts: Journal of Mathematical Analysis and Applications, Vol- 487, - (2020)
16. Pal S., Banerjee M., Volpert V., Spatio-temporal Bazykin's model with space-time nonlocality: Mathematical Biosciences and Engineering, Vol- 17, 4801-4824 (2020)
17. Patra L.K., On the improved estimation of a function of the scale parameter of an exponential distribution based on doubly censored sample: Journal of Applied Statistics, Vol- 47, 1637-1651 (2020)
18. Roozegar R., Kundu D., On absolutely continuous bivariate generalized exponential power series distribution: Communications in Statistics: Simulation and Computation, Vol- 49, 1678-1703 (2020)
19. Al Basir F., Adhurya S., Banerjee M., Venturino E., Ray S., Modelling the Effect of Incubation and Latent Periods on the Dynamics of Vector-Borne Plant Viral Diseases: Bulletin of Mathematical Biology, Vol- 82, - (2020)
20. Anand A., Chavan S., Jabłoński Z.J., Stochel J., The Cauchy dual subnormality problem for cyclic 2-isometries: Advances in Operator Theory, Vol- 5, 1061-1077 (2020)
21. Mondal S., Bhattacharya R., Pradhan B., Kundu D., Bayesian optimal life-testing plan under the balanced two sample type-II progressive censoring scheme: Applied Stochastic Models in Business and Industry, Vol- 36, 628-640 (2020)
22. Mohapatra S., Dutt P., Rathish Kumar B.V., Gerritsma M.I., Non-conforming least-squares spectral element method for Stokes equations on non-smooth domains: Journal of Computational and Applied Mathematics, Vol- 372, - (2020)
23. Rao S.E., Sharma S.S., Batra P., Integrable modules for twisted toroidal extended affine Lie algebras: Journal of Algebra, Vol- 556, 1057-1072 (2020)

24. Das A., Hom-associative algebras up to homotopy: *Journal of Algebra*, Vol- 556, 836-878 (2020)
25. Shukla P.K., Dutta J., Deb K., Kesarwani P., On a practical notion of Geoffrion proper optimality in multicriteria optimization: *Optimization*, Vol- 69, 1513-1539 (2020)
26. Petropoulos C., Patra L.K., Kumar S., Improved estimators of the entropy in scale mixture of exponential distributions: *Brazilian Journal of Probability and Statistics*, Vol- 34, 580-593 (2020)
27. Bal K., Garain P., Multiplicity of Solution for a Quasilinear Equation with Singular Nonlinearity: *Mediterranean Journal of Mathematics*, Vol- 17, - (2020)
28. Shukla H., Jain A., Kuber A., Definable combinatorics with dense linear orders: *Archive for Mathematical Logic*, Vol- 59, 679-701 (2020)
29. Kumar B.V.R., Halim A., Vijayakrishna R., Higher order PDE based model for segmenting noisy image: *IET Image Processing*, Vol- 14, 2597-2609 (2020)
30. Akhtar M.N., Guru Prem Prasad M., Kapoor G.P., Image compression using fractal multiwavelet transform: *Journal of Analysis*, Vol- 28, 769-789 (2020)
31. Bhar S., Bhaskaran R., Sarkar B., Stochastic PDEs in  $S'$  for SDEs driven by Lévy noise: *Random Operators and Stochastic Equations*, Vol- 28, 217-226 (2020)
32. Trivedi S., Bounded point evaluation for a finitely multicyclic commuting tuple of operators: *Bulletin des Sciences Mathématiques*, Vol- 162, - (2020)
33. Sachan D., Sharma I., Muthukumar T., Indentation of a Periodically Layered, Planar, Elastic Half-Space: *Journal of Elasticity*, Vol- 141, - (2020)
34. Najarzadegan H., Alamatsaz M.H., Kazemi I., Kundu D., Weighted bivariate geometric distribution: Simulation and estimation: *Communications in Statistics: Simulation and Computation*, Vol- 49, 2419-2443 (2020)
35. Das A., Deformations of associative Rota-Baxter operators: *Journal of Algebra*, Vol- 560, 144-180 (2020)
36. Franco M., Vivo J.-M., Kundu D., A generator of bivariate distributions: Properties, estimation, and applications: *Mathematics*, Vol- 8, 45321 (2020)
37. Bal K., Mohanta K., Roy P., Bourgain-Brezis-Mironescu domains: *Nonlinear Analysis, Theory, Methods and Applications*, Vol- 199, - (2020)
38. Nayek A., Pattanayak S.K., Jindal S., Projective normality of torus quotients of flag varieties: *Journal of Pure and Applied Algebra*, Vol- 224, - (2020)

39. Nayek A., Pattanayak S.K., Torus quotient of Richardson varieties in orthogonal and symplectic grassmannians: *Journal of Algebra and its Applications*, Vol- 19, - (2020)
40. Halim A., Kumar B.V.R., A TV–L2–H–1 PDE model for effective denoising: *Computers and Mathematics with Applications*, Vol- 80, 2176-2193 (2020)
41. Sharma S., Volpert V., Banerjee M., Extended SEIQR type model for COVID-19 epidemic and data analysis: *Mathematical biosciences and engineering : MBE*, Vol- 17, 7562-7604 (2020)
42. Jha S., Ochiai T., Control theorem and functional equation of Selmer groups over p-adic Lie extensions: *Selecta Mathematica, New Series*, Vol- 26, - (2020)
43. Franco M., Vivo J.-M., Kundu D., A generalized Freund bivariate model for a two-component load sharing system: *Reliability Engineering and System Safety*, Vol- 203, - (2020)
44. Banerjee M., Kooi B.W., Venturino E., A safe harbor can protect an endangered species from its predators: *Ricerche di Matematica*, Vol- 69, 413-436 (2020)
45. Kundu D., On a General Class of Discrete Bivariate Distributions: *Sankhya B*, Vol- 82, 270-304 (2020)
46. Banerjee M., Volpert V., Stochastic intracellular regulation can remove oscillations in a model of tissue growth: *Mathematical Medicine and Biology*, Vol- 37, 551-568 (2020)
47. Verma S., Santhanam G., On eigenvalue problems related to the laplacian in a class of doubly connected domains: *Monatshefte fur Mathematik*, Vol- 193, 879-899 (2020)
48. Basu S., Blanc D., Sen D., Note on Toda brackets: *Journal of Homotopy and Related Structures*, Vol- 15, 495-510 (2020)
49. Chavan S., Gupta R., Ramiz Reza M., Dirichlet-type spaces on the unit ball and joint 2-isometries: *Journal of Functional Analysis*, Vol- 279, - (2020)
50. Mukhopadhyay M., Li D., Dunson D.B., Estimating densities with non-linear support by using Fisher–Gaussian kernels: *Journal of the Royal Statistical Society. Series B: Statistical Methodology*, Vol- 82, 1249-1271 (2020)
51. Kundu D., Professor C R Rao’s contributions in statistical signal processing and its long-term implications: *Proceedings of the Indian Academy of Sciences: Mathematical Sciences*, Vol- 130, - (2020)

52. Ghosh A., Bhojak A., Mohanty P., Shrivastava S., Sharp weighted estimates for multilinear Calderón–Zygmund operators on non-homogeneous spaces: *Journal of Pseudo-Differential Operators and Applications*, Vol- 11, 1833-1867 (2020)
53. Bagchi P., Sankar Dhar S., A study on the least squares estimator of multivariate isotonic regression function: *Scandinavian Journal of Statistics*, Vol- 47, 1192-1221 (2020)
54. Verma S., Upper bound for the first nonzero eigenvalue related to the p-Laplacian: *Proceedings of the Indian Academy of Sciences: Mathematical Sciences*, Vol- 130, - (2020)
55. Das A., Gerstenhaber algebra structure on the cohomology of a hom-associative algebra: *Proceedings of the Indian Academy of Sciences: Mathematical Sciences*, Vol- 130, - (2020)
56. Sen D., Ghorai S., Sharma S., Banerjee M., Allee effect in prey's growth reduces the dynamical complexity in prey-predator model with generalist predator: *Applied Mathematical Modelling*, Vol- 91, 768-790 (2021)
57. Sinha P., Verma B., Ganesh S., Trehalose Ameliorates Seizure Susceptibility in Lofa Disease Mouse Models by Suppressing Neuroinflammation and Endoplasmic Reticulum Stress: *Molecular Neurobiology*, Vol- 58, 1088-1101 (2021)
58. Pal A., Mondal S., Kundu D., A Cure Rate Model for Exponentially Distributed Lifetimes with Competing Risks: *Journal of Statistical Theory and Practice*, Vol- 15, - (2021)
59. Shalabh, Dhar S.S., Goodness of Fit in Nonparametric Regression Modelling: *Journal of Statistical Theory and Practice*, Vol- 15, - (2021)
60. Bonala N.C., Pattanayak S.K., On the torus quotients of schubert varieties: *International Journal of Mathematics*, Vol- 32, - (2021)
61. Sharma B.L., Basak N., Null Lagrangians in Cosserat Elasticity: *Journal of Elasticity*, Vol- 143, 337-358 (2021)
62. Guin S., Saurabh B., Representations and classification of the compact quantum groups  $U_q(2)$  for complex deformation parameters: *International Journal of Mathematics*, Vol- 32, - (2021)
63. Hare K.E., Mohanty P., A Non-abelian, Non-Sidon, Completely Bounded Set: *Canadian Mathematical Bulletin*, Vol- 64, 45298 (2021)
64. Giri D.K., Rawat R., Heisenberg uniqueness pairs for the hyperbola: *Bulletin of the London Mathematical Society*, Vol- 53, 16-25 (2021)

65. Singh U.P., Sinha P., Kumar M., Analysis of hydrostatic rough thrust bearing lubricated with Rabinowitsch fluid considering fluid inertia in supply region: Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, Vol- 235, 386-395 (2021)
66. Pal S., Petrovskii S., Ghorai S., Banerjee M., Spatiotemporal pattern formation in 2D prey-predator system with nonlocal intraspecific competition: Communications in Nonlinear Science and Numerical Simulation, Vol- 93, - (2021)
67. Ghosh U., Pal S., Banerjee M., Memory effect on Bazykin's prey-predator model: Stability and bifurcation analysis: Chaos, Solitons and Fractals, Vol- 143, - (2021)
68. Basak N., Sharma B.L., Null Lagrangians in linear theories of micropolar type and few other generalizations of elasticity: Zeitschrift fur Angewandte Mathematik und Physik, Vol- 72, - (2021)
69. Bandyopadhyay C., Free product on semihypergroups: Semigroup Forum, Vol- 102, 28-47 (2021)
70. Banerjee M., Petrovskii S.V., Volpert V., Nonlocal reaction–diffusion models of heterogeneous wealth distribution: Mathematics, Vol- 9, 45309 (2021)
71. Grover R., Kundu D., Mitra A., An efficient methodology to estimate the parameters of a two-dimensional chirp signal model: Multidimensional Systems and Signal Processing, Vol- 32, 49-75 (2021)
72. Singh L., Bahuguna D., Smooth Invariant Manifolds for Differential Equations with Infinite Delay: Journal of Dynamical and Control Systems, Vol- 27, 107-132 (2021)
73. Saha T., Pal P.J., Banerjee M., Relaxation oscillation and canard explosion in a slow–fast predator–prey model with Beddington–DeAngelis functional response: Nonlinear Dynamics, Vol- 103, 1195-1217 (2021)
74. Csató G., Nguyen V.H. and Roy P., Extremals for the singular Moser-Trudinger inequality via n-harmonic transplantation: Journal of Differential Equations, Vol- 270, 843-882 (2021)
75. Jha S., Majumdar D. and Shekhar S.,  $p^r$ -Selmer companion modular forms: Annales de l'Institut Fourier, Vol- 25934, 53-87 (2021)
76. Chavan S., Jabłoński Z. J., Jung II B. and Stochel J. T., spectrum approach to Brownian-type operators with quasinormal entry: Ann. Mat. Pura Appl. (4) 200., Vol- no. 3, 881–922 (2021)

77. A.K.Md.E. Saleh and Shalabh, On Liu-Type Biased Estimators in Measurement Error Models: *Statistics*, Vol- 54, 1171-1213 (2020)
78. Bresson G., Chaturvedi A., Mohammad A. R. and Shalabh, Seemingly Unrelated Regression with Measurement Error: Estimation via MCMC and Mean Field Variational Bayes Approximation: *International Journal of Biostatistics*, Vol- 17, 75-97 (2021)
79. Robertson, N. and Flegal, J. M., Vats, D and Jones, G. L., Assessing and Visualizing Simultaneous Simulation Error: *Journal of Computational and Graphical Statistics*, Vol- 30, 324-334 (2021)
80. Priyadarshi G. and Kumar B.V.R., reconstruction of the parameter in parabolic partial differential equations using Haar wavelet method -: *Engineering Computations*, doi.org/10.1108/EC-03-2020-0163, Vol- , (2020)
81. Priyadarshi G. and Kumar B.V.R., Parameter Identification in Multidimensional Hyperbolic Partial Differential Equations using Wavelet Collocation Method: *Mathematical Methods in the Applied Sciences* doi.org/10.1002/mma.733, Vol-,(2021)
82. Raturi S. and Kumar B.V.R., Effect of insoluble surfactants on the motion of Reiner–Rivlin fluid sphere in a spherical container with Newtonian fluid: *ZAMP*, Vol- , (2021)
83. Pal A. & Pandey R., Acylindrical hyperbolicity of subgroups: *New York Journal of Mathematics*, Vol- 26, 1213-1231 (2020)
84. Pal A., Height in Splittings of Relatively Hyperbolic groups: *Geometriae Dedicata*, Vol- 213, 121-135 (2021)
85. Volpert V., Banerjee M., d'Onofrio A., Lipniacki T., Petrovskii S., Tran V.C., Coronavirus - Scientific insights and social aspects: *Mathematical Modelling of Natural Phenomena*, Vol- 15, E2 (2020)
86. Volpert V., Banerjee M., Petrovskii S., On a quarantine model Coronavirus infection and data analysis: *Mathematical Modelling of Natural Phenomena*, Vol- 15, 24 (2020)
87. Banerjee M., Tokarev A., Volpert V., Immuno-epidemiological model of two-stage epidemic growth: *Mathematical Modelling of Natural Phenomena*, Vol- 15, 27 (2020)
88. Al Basir F., Adhurya S., Banerjee M., Venturino E., Ray S., Modelling the effect of incubation and latent periods on the dynamics of vector borne plant-virus diseases: *Bulletin of Mathematical Biology*, Vol- 82(7), 45313 (2020)

89. Anand A., Owall J., Reynolds S. and Weisser S., Trefftz finite elements on curvilinear polygons: SIAM Journal of Scientific Computing, Vol- Volume 42, Issue 2, , A1289-A1316 (2020)
90. Bal K. and Garain P., Multiplicity of solution for a quasilinear equation with singular nonlinearity: Mediterr. J. Math., Vol- 4, Paper No. 100, 20 pp (2020)
91. . Bal, K., Mohanta K. and Roy, P., Bourgain-Brezis-Mironescu domains: Nonlinear Anal. , Vol- , 10 pp (2020)
92. Bal, K., Garain, P., Weighted and anisotropic Sobolev inequality with extremal: Manuscripta Math, Vol- , 10pp (2021)
93. Hatui S., Singla P., On Schur multiplier and projective representations of Heisenberg groups : Journal of Pure and Applied Algebra, Vol- 225, - (2021)

## **BOOK CHAPTERS**

1. Shalabh and Dhar S. S., Socio-economic and Eco-biological Dimensions of Climate Change: Strategies for Resource Use, Conservation and Ecological Sustainability, Springer, 351-378 (2020), ISBN- 978-3-030-32462-9