

Department of Mathematics

Research Publications in 2017

International Journals

1. Susmita Gupta and Niladri Chatterjee; A Hybrid Approach using Phrases and Rules for Hindi to English Machine Translation. *International Journal of Natural Language Computing (IJNLC)* Vol 6, No. 3, (2017) pp.53-57.
2. S. Dharmaraja; Puneet Pasricha and Paola Tardelli; Markov Chain Model with Catastrophe to Determine Mean Time to Default of Credit Risky Assets, *Journal of Statistical Physics*, 169, (2017) pp. 876 - 888.
3. Singh, Arti; S. Dharmaraja; Mean-variance optimal trading problem subject to stochastic dominance constraints with second order autoregressive price dynamics. *Math. Methods Oper. Res.* 86 (2017), no. 1, 29–69.
4. Arti Singh and S. Dharmaraj, A portfolio optimisation model for credit risky bonds with Markov model credit rating dynamics, *International Journal of Financial Markets and Derivatives*, 6, (2017) pp. 102 - 119.
5. Puneet Pasricha; S. Dharmaraja and Viswanathan Arunachalam; Markov Regenerative Credit Rating Model, *Journal of Risk Finance*, 18, Issue 3, (2017), pp. 311 -325.
6. R. Sudhesh; A. Azhagappan and S. Dharmaraja; Transient analysis of M/M/1 queue with working vacation, heterogeneous service and customers' impatience, *RAIRO - Operations Research*, 51 (3) 2017, pp. 591 - 606.
7. Sudhesh, R.; Savitha, P.; S.Dharmaraja; Transient analysis of a two-heterogeneous servers queue with system disaster, server repair and customers' impatience. *TOP* 25(2017), no. 1, 179–205.
8. Meena, Asha Kumari; Kumar, Harish; Chandrashekar, Praveen; Positivity-preserving high-order discontinuous Galerkin schemes for ten-moment Gaussian closure equations. *J. Comput. Phys.* 339 (2017), 370–395.
9. Jindal, A.; Jindal, V.; Kundu, S.; McCoy, R. A.; Completeness properties of the open-point and bi-point-open topologies on $C(X)$. *Acta Math. Hungar.* 153 (2017), no. 1, 109–119.
10. Jindal, Anubha; McCoy, R. A.; Kundu, S.; The bi-compact-open topology on $C(X)$. *Boll. Unione Mat. Ital.* 10 (2017), no. 4, 595–605.
11. Jindal, Anubha; McCoy, R. A.; Kundu, S.; Density of the open-point, bi-point-open, and bi-compact-open topologies on $C(X)$. *Topology Proc.* 50 (2017), 249–261.
12. Arora, Nitin; Kundu, S.; Commutative feebly clean rings. *J. Algebra Appl.* 16(2017), no. 7, 1750128, 14 pp.
13. Aggarwal, M.; Kundu, S.; More on variants of complete metric spaces. *Acta Math. Hungar.* 151 (2017), no. 2, 391–408.
14. Aggarwal, Manisha; Kundu, S.; Boundedness of the relatives of uniformly continuous functions. *Topology Proc.* 49 (2017), 105–119.

15. Aggarwal, Manisha; Kundu, S. Cauchy metrizable of bornological universes. *J. Convex Anal.* 24 (2017), no. 4, 1085–1098.
16. Kundu, S.; Aggarwal, Manisha; Hazra, Somnath; Finitely chainable and totally bounded metric spaces: equivalent characterizations. *Topology Appl.* 216 (2017), 59–73.
17. Sharma, Amita; Mehra, Aparna; Financial analysis based sectoral portfolio optimization under second order stochastic dominance. *Ann. Oper. Res.* 256 (2017), no. 1, 171–197.
18. Sharma, Amita; Utz, Sebastian; Mehra, Aparna; Omega-CVaR portfolio optimization and its worst case analysis. *OR Spectrum* 39 (2017), no. 2, 505–539.
19. Sahu, Mamata; Gupta, Anjana; Mehra, Aparna; Hierarchical clustering of interval-valued intuitionistic fuzzy relations and its application to elicit criteria weights in MCDM problems. *Opsearch* 54 (2017), no. 2, 388–416.
20. Sharma, Amita; Mehra, Aparna; Extended omega ratio optimization for risk-averse investors. *Int. Trans. Oper. Res.* 24 (2017), no. 3, 485–506.
21. Sharma, Amita; Agrawal, Shubhada; Mehra, Aparna; Enhanced indexing for risk averse investors using relaxed second order stochastic dominance. *Optim. Eng.* 18 (2017), no. 2, 407–442.
22. Khan, I.; Aggarwal, A.; Mehra, A.; Chandra, S.; Solving matrix games with Atanassov's I-fuzzy goals via indeterminacy resolution approach. *J. Inf. Optim. Sci.* 38 (2017), no. 2, 259–287.
23. Patel, Kuldeep Singh; Mehra, Mani; Fourth-Order Compact Finite Difference Scheme for American Option Pricing Under Regime-Switching Jump-Diffusion Models. *Int. J. Appl. Comput. Math.* 3 (2017), suppl. 1, 547–567.
24. Behera, Ratikanta; Mehra, Mani; Approximation of the differential operators on an adaptive spherical geodesic grid using spherical wavelets. *Math. Comput. Simulation* 132 (2017), 120–138.
25. Goyal, Kavita; Mehra, Mani; An adaptive meshfree spectral graph wavelet method for partial differential equations. *Appl. Numer. Math.* 113 (2017), 168–185.
26. Mani Mehra and Kuldeep Singh Patel, A suite of compact finite difference schemes, *ACM Transaction on Mathematical software*, Vol. 44 (2017).
27. Akin, Ethan; Auslander, Joseph; Nagar, Anima; Dynamics of induced systems. *Ergodic Theory Dynam. Systems* 37 (2017), no. 7, 2034–2059.
28. Arti Pandey and B.S. Panda; Restrained Domination in Some Subclasses of Chordal Graphs, *Electronic Notes in Discrete Mathematics* 63, (2017) 203–210.
29. Panda, B. S.; Pandey, Arti; Algorithmic aspects of open neighborhood location-domination in graphs. *Discrete Appl. Math.* 216 (2017), part 1, 290–306.
30. Priyadarshi, Amit; Lower bound on the Hausdorff dimension of a set of complex continued fractions. *J. Math. Anal. Appl.* 449 (2017), no. 1, 91–95.
31. Prajapati, S. K.; Sarma, R.; A study of the number of roots of $x^k=g$ in a finite group via its Frobenius-Schur indicators. *Algebra Colloq.* 24 (2017), no. 1, 93–108.

32. Jindal, Ankita; Laishram, Shanta; Sarma, Ritumoni; Irreducibility and Galois groups of generalized Laguerre polynomials $L^{(-1-n-r)^n}(x)$. *J. Number Theory* 183 (2018), 388–406
33. Yadav, V. K.; and Sharma, R. K.; Skew n-derivation on prime and semi prime rings. *Ann. Univ. Ferrara Sez. VII Sci. Mat.* 63 (2017), no. 2, 391–402.
34. Udar, Dinesh; Sharma, R. K.; and Srivastava, J. B.; Restricted Boolean group rings. *Arch. Math. (Brno)* 53 (2017), no. 3, 155–159.
35. Tiwari, S. K.; and Sharma, R. K.; Derivations vanishing identities involving generalized derivations and multilinear polynomial in prime rings. *Mediterr. J. Math.* 14 (2017), no. 5, Art. 207, 23 pp.
36. Kanwar, Pramod; Khatkar, Meenu; and Sharma, R. K.; Idempotents and units of matrix rings over polynomial rings. *Int. Electron. J. Algebra* 22 (2017), 147–169.
37. Udar, D.; Sharma, R. K.; and Srivastava, J. B.; Commutative neat group rings. *Comm. Algebra* 45 (2017), no. 11, 4939–4943.
38. Yadav, V. K.; Tiwari, S. K.; and Sharma, R. K.; Generalized derivations on Lie ideals in prime rings. *Asian-Eur. J. Math.* 10 (2017), no. 2, 1750032, 6 pp.
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46. Sharma, R. K.; Prajapati, B.; Generalized derivations and commutativity of prime Banach algebras. *Beitr. Algebra Geom.* 58 (2017), no. 1, 179–187.
47. Tiwari, S. K.; Prajapati, B.; and Sharma, R. K.; Banach algebra with generalized derivations. *Asian-Eur. J. Math.* 10 (2017), no. 4, 1750069, 11 pp.
48. Rao, S. Chandra Sekhara; and Srivastava, Varsha; Parameter-robust numerical method for time-dependent weakly coupled linear system of singularly perturbed convection-diffusion equations. *Differ. Equ. Dyn. Syst.* 25 (2017), no. 2, 301–325.

49. Kumar, Sunil; and Rao, S. Chandra Sekhara; A robust domain decomposition algorithm for singularly perturbed semilinear systems. *Int. J. Comput. Math.* 94 (2017), no. 6, 1108–1122.
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55. Tuhina Mukherjee and K. Sreenadh; Fractional Choquard Equation with Critical Nonlinearities, *Nonlinear Differential Equations and applications*, 24 (2017), no. 6, 24:63.
56. Musina, Roberta; Nazarov, Alexander I.; and Sreenadh, Konijeti; Variational inequalities for the fractional Laplacian. *Potential Anal.* 46 (2017), no. 3, 485–498.
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58. Chaudhary, Sudhakar; Srivastava, Vimal; and Srinivas Kumar, V. V. K.; Finite element scheme with Crank-Nicolson method for parabolic nonlocal problems involving the Dirichlet energy. *Int. J. Comput. Methods* 14 (2017), no. 5, 1750053, 24 pp.
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66. Kaur, Taranjot; and Sharma, Anuradha; Constacyclic additive codes over finite fields. *Discrete Math. Algorithms Appl.* 9 (2017), no. 3, 1750037, 35 pp.
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69. Singh, Arti; Optimal portfolio execution under cointegrated vector autoregressive systems. *Optimization* 66 (2017), no. 11, 1931–1951.
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73. Singh, Vikas Vikram; Jouini, Oualid; and Lisser, Abdel; Distributionally robust chance-constrained games: existence and characterization of Nash equilibrium, *Optim. Lett.* 11 (2017), no. 7, 1385–1405.

Conference Proceedings

1. Pandey, Arti; Panda, B. S.; Dane, Piyush; and Kashyap, Manav; Induced matching in some subclasses of bipartite graphs. *Algorithms and discrete applied mathematics*, 308–319, Lecture Notes in Comput. Sci., 10156, Springer, Cham, 2017.
2. B. S. Panda; and Arti Pandey; On the Complexity of Minimum Cardinality Maximal Uniquely Restricted Matching in Graphs, *Lecture Notes in Computer Science*, vol. 10398, (2017), 218-227.
3. B. S. Panda; and Shaily Verma; Partial Grundy Coloring in Some Subclasses of Bipartite Graphs and Chordal Graphs, *Lecture Notes in Computer Science*, vol. 10398, (2017) 228-237.
4. Nidhika Yadav; and Niladri Chatterjee; A Novel Approach for Feature Selection using Rough Set. *Proceedings Comptelix-2017, IEEE Explore*, pp 196 - 199, 2017.
5. Niladri Chatterjee; Neha Kaushik; Deepali Gupta; and Ramneek Bhatia; Ontology Merging: A Practical Perspective. *Proceedings ICTIS Ahmedabad, March 2017, Springer*.
6. Kartikay Gupta; and Niladri Chatterjee; Financial Time Series Clustering. *Proceedings ICTIS Ahmedabad, March 2017, Springer*.

Edited Book

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