Department of Mathematics
List of Publications in 2015

Journal Publications

1. Barman R., Kalita G.: Hyperelliptic curves over F_q and Gaussian hypergeometric series, *Journal of Ramanujan Mathematical Society*, Volume 30, 331-348 (2015).
2. Barman R., Saikia N.: Certain transformations for hypergeometric series in p-adic setting, *International Journal of Number Theory*,Volume 11, 645-660 (2015).
3. Barman R., Saikia N., McCarty D.: Summation identities and special values of hypergeometric series in the p-adic setting, *Journal of Number Theory,* Volume 153, 63-84 (2015).
4. Chandra B., Sharma R.K.: Fast learning in deep neural networks, *Neurocomputing*, Volume 171, 1205-1215 (2015).
5. Balyan, R., Chatterjee N.: Translating Noun Compounds Using Semantic Relations. Computer Speech and Languages, Volume 32, 91- 108 (2015).
6. Chatterjee N., Sahoo P. K.: Random indexing and modified random indexing based approach for extractive text summarization, *Computer Speech and Language*, Volume 29, 32-44 (2015).
7. Dharmaraja S., Kumar R.: Transient solution of a Markovian queuing model with heterogeneous servers and catastrophes, *Opsearch*, Volume 52, PP. 810 – 826 (2015).
8. Dharmaraja S., Di Crescenzo A., Giorno V., Nobile G.A.: A continuous-time Ehrenfest model with catastrophes and its jump-diffusion approximation, *Journal of Statistical Physics*, Volume 161, PP. 326-345 (2015).
9. Gupta V., Dharmaraja S., Arunachalam V.: Stochastic modeling for delay analysis of a VoIP network, *Annals of Operations Research*, Volume 233, PP. 171 – 180 (2015).
10. Kapoor S., Dharmaraja S.: On the exact transient solution of fluid queue driven by a birth death process with specific rational rates and absorption, *Opsearch*, Volume 52, PP. 746 – 755 (2015).
11. Jindal A., McCoy R.A., Kundu S.: The open-point and bi-point-open topologies on C(X), *Topology and its Applications*, Volume 187, 62-74 (2015).
12. Jindal A., McCoy R.A., Kundu S.: The open-point and bi-point-open topologies on C(X): Submetrizability and cardinal functions, *Topology and its Applications*, Volume 196, 229-240 (2015).
13. Parthasarathy K., Kumar Shravan .N.: Feichtinger's Segal algebra on homogeneous spaces, *International Journal of Mathematics*, Volume 26, pages 9 (2015).
14. Dubey D., Chandra S., Mehra A.: Computing a Pareto-optimal solution for multi-objective flexible linear programming in a bipolar framework, *International Journal of General Systems*, Volume 44, 457-470 (2015).
15. Gupta A., Mehra A., Appadoo S.S.: Mixed solution strategy for MCGDM problems using entropy/cross entropy in interval-valued intuitionistic fuzzy environment, *International Game Theory Review*, Volume 17, pages 22 (2015).
16. Mehra M., Behera R., Goyal K.: A dynamic adaptive wavelet method for solution of the Schrodinger equation, *Journal of Multiscale Modelling*, Volume 6(1), 1-22 (2015).

17. Panda B.S., Goel P.: L (2,1)-labelling of block graphs, *Ars Combinatoria*, Volume 119, 71-95 (2015).
18. Panda B.S., Pradhan D.: A linear time algorithm to compute a minimum restrained dominating set in proper interval graphs, *Discrete Mathematics Algorithms and Applications*, Volume 7(2), 1550020 (21 pages) (2015).
19. Panda B.S., Shetty D.P.: Strong minimum energy 2-hop rooted topology for hierarchical wireless sensor networks, *Journal of Combinatorial Optimization*, Volume 30 (4), 1077-1094 (2015).
20. Panda B. S., Paul, S.; Pradhan, D, Hardness results, approximation and exact algorithms for liar's domination problem in graphs, *Theoretical Computer Science*, Volume 573, 26–42 (2015).
21. Panda, B.S., Arti Pandey, On the dominator coloring in proper interval graphs and block graphs, Discrete Mathematics, Algorithms and Applications, Volume: 7(4), (17 pages), 2015.
22. Prajapati S.K., Sarma R.: On group equations, *Bulletin of the Iranian Mathematical Society*, Volume 41, 315-324 (2015).
23. Sarma R., Kushwaha S., Krishnan R.: Continued fractions arising from $F_{1,2}$, *Journal of Number Theory*, Volume 154, 179-200 (2015).
24. Sharma A.: Repeated-root constacyclic codes of length $l^t p^s$ and their dual codes. *Cryptography and Communications*, Volume 7, 229-255 (2015).
25. Sharma A., Sharma A. K.: Byte weight enumerators and modular forms of genus r. *Journal of Algebra and its applications*, Volume 14(6), pages 25 (2015).
26. Sharma A.: Self-dual and self-orthogonal negacyclic codes of length $2^m p^n$ over a finite field. *Discrete Mathematics*, Volume 338, 576-592 (2015).
27. Kumar S., Sharma R.K.: Random-grid based region incrementing visual secret sharing, *Fundamenta Informaticae*, Volume 137, 1-18 (2015).
28. Makhijani N., Sharma R.K., Srivastava J.B.: On the order of unitary subgroup of the modular group algebra $F_2^k D_{2N}$, *Journal of Algebra and its Applications*, Volume 14, pages 10 (2015).
29. Mishra D.C., Sharma R.K., Dawar M., Hanmandlu M.: Two layers of security for color video by matrix affine cipher with two dimensional discrete wavelet transform, *Fractals*, Volume 23, pages 22 (2015).
30. Mishra D.C., Sharma R.K., Ranjan R., Hanmandlu M.: Security of RGB image data by affine hill cipher over $SL_n(F_q)$ and $M_n(F_q)$ domains with Arnold transform, *Optik*, Volume 126, 3812-3822 (2015).
31. Goyal S., Sreenadh K.: Nehari manifold for non-local elliptic operator with concave–convex nonlinearities and sign-changing weight functions, *Proc. Indian Acad. Sci. (Math. Sci.)* Vol. 25, No. 4, pp. 545–558 (2015).
32. Goyal S., Sreenadh K.: The Nehari manifold for a quasilinear polyharmonic equation with exponential nonlinearities and a sign-changing weight function, *Advances in Nonlinear Analysis*, Volume 4(3), 177-200 (2015).
33. Goyal S., Sreenadh K.: Existence of nontrivial solutions to quasi-linear poly harmonic equations with critical exponential growth, *Advances in Pure and Applied Mathematics*, Volume 6(1), 1-11 (2015).

34. Goyal S., Sreenadh K.: The Nehari Manifold approach for N-Laplace equation with singular and exponential nonlinearities in R^N, *Communications in Contemporary Mathematics*, Volume 17(3), 1450011 (22 pages) (2015).
35. Goyal S., Sreenadh K.: Existence of multiple solutions for p-fractional Laplace equation with sign-changing nonlinearities, *Advances in nonlinear analysis*, Volume 4(1), 37-58 (2015).
36. Mishra P.K., Sreenadh K.: Existence of solutions for a fractional p-Kirchhoff equation with critical non-linearities, *Electronic Journal of Differential Equations* 2015, no. 93 (2015): 1-14.
37. Chaudhary S., Srinivas V. V. K.: Web-spline based finite element approximation of some quasi-Newtonian flows: Existence-uniqueness and error bound, *Numerical Methods for Partial Differential Equations*, Volume 31(1), 54-77 (2015).

Conference Publications

1. Chandra B., Sharma R.K.: Exploring auto encoders for unsupervised feature selection, *International Joint Conference on Neural Networks*, 2015: 1-6.
2. Panda B.S.: Separator theorems for interval graphs and proper interval graphs, *(CALDAM 2015)*, Lecture Notes in Computer Science, Springer, 8959, (2015) 101-110.
3. Pandey A., Panda B.S.: Domination in some subclasses of bipartite graphs, *(CALDAM 2015)*, Lecture Notes in Computer Science, Springer, 8959, (2015) 169-180.
4. Panda B.S., Pandey A., Paul S.: Algorithmic aspects of disjunctive domination in graphs, *(COCOON 2015)*, Lecture Notes in Computer Science, Springer 9198, 325-336 (2015).
5. Panda B.S., Shetty D. P., Pandey A.: k-Distinct strong minimum energy topology problem in wireless sensor networks, *(ICDCIT 2015)*, Lecture Notes in Computer Science, Springer, 8956, (2015) 187-192.
6. Panda B.S., Bhatta B.K., Mishra D., De Swades: Boruvka-Incremental power greedy heuristic for strong minimum energy topology in wireless sensor networks, *(ICDCN 2015)*, ACM (2015)25:1-25:8.