

Department of Mathematics

List of Publications 2013

Journal Publications

1. Tripathi, Amitabha The Frobenius problem for modified arithmetic progressions. *J. Integer Seq.* 16 (2013), no. 7, Article 13.7.4, 6 pp.
2. Tiwari, Apurv; Tripathi, Amitabha On the range of size of sum graphs & integral sum graphs of a given order. *Discrete Appl. Math.* 161 (2013), no. 16-17, 2653–2661.
3. Tripathi, Amitabha A note on a special case of the Frobenius problem. *Indian J. Pure Appl. Math.* 44 (2013), no. 3, 375–381.
4. Sharma, Anuradha; Sharma, Amit K. On a g-fold joint m-spotty Lee weight enumerator. *Discrete Math.* 313 (2013), no. 20, 2150–2161
5. Gupta, Rachana; Mehra, Aparna Gap functions and error bounds for inverse quasi-variational inequality problems. *J. Math. Anal. Appl.* 407 (2013), no. 2, 270–280.
6. Ritumoni Sarma, Sunil Kumar Prajapati, “On the Solution of  $x^k=g$  in a finite group” , *B. Korean Math. Soc.*, Vol. 50(2), pp. 697-704, 2013.
7. Dhara, Anulekha; Mehra, Aparna Second-order optimality conditions in minimax optimization problems. *J. Optim. Theory Appl.* 156 (2013), no. 3, 567–590.
8. B. Chandra, Shalini Bhaskar, “A Novel Approach for Finding Frequent Itemsets in Data Stream”, *International Journal of Intelligent Systems*, Vol. 28(3), pp. 217-241, 2013.
9. B. Chandra, Manish Gupta, “A novel approach for distance-based semi-supervised clustering using functional link neural network”, *Soft Comput.*, Vol. 17(3), pp. 369-379, 2013.
10. Rao, S. Chandra Sekhara; Kumar, Mukesh An almost fourth order parameter-robust numerical method for a linear system of ( $M \geq 2$ ) coupled singularly perturbed reaction-diffusion problems. *Int. J. Numer. Anal. Model.* 10 (2013), no. 3, 603–621.
11. S. Chandra Sekhara Rao, S. Kumar, “Robust High Order Convergence of an Overlapping Schwarz Method for a Singularly Perturbed Semilinear Reaction-Diffusion Problems”, *J. Comp. Math.*, Vol. 31, pp. 509-521. 2013.
12. Vandana Gupta, S. Dharmaraja, “Reliability and performance modeling of VoIP system with multiple component failure”, *International Journal of Reliability and Safety*, Vol. 7, pp. 58 – 74, 2013.
13. Jeltsch, Rolf; Kumar, Harish Three-dimensional plasma arc simulation using resistive MHD. The Courant-Friedrichs-Lewy (CFL) condition, 31–43, Birkhäuser/Springer, New York, 2013.
14. Jindal, Varun; McCoy, R. A.; Kundu, S. Path components in the uniform spaces of continuous functions into a normed linear space. *Topology Proc.* 43 (2014), 19–27.
15. Kundu, S.; Pandey, Vipra Countability properties of the  $\sigma$ -compact-open topology on  $C^*(X)$ . *Topology Proc.* 41 (2013), 153–165.
16. Behera, Ratikanta; Mehra, Mani Approximate solution of modified Camassa-Holm and Degasperis-Procesi equations using wavelet optimized finite difference method. *Int. J. Wavelets Multiresolut. Inf. Process.* 11 (2013), no. 2, 1350019, 13 pp.
17. Behera, Ratikanta; Mehra, Mani Integration of barotropic vorticity equation over spherical geodesic grid using multilevel adaptive wavelet collocation method. *Appl. Math. Model.* 37 (2013), no. 7, 5215–5226.
18. M. Mehra, K. Goyal, A suit on wavelet differentiation algorithms, *ACM Transaction on Mathematical software*, Vol. 39 (4), pp. 1-28, 2013.

19. Niladri Chatterjee and Pramod K. Sahoo. Effect of Near-Orthogonality on Random Indexing Based Extractive Text Summarization. *International Journal of Innovation and Applied Studies*. Vol 3, No. 3, 701 – 713, 2013.
20. Mariya Khatoun, Geetam Tiwari, Niladri Chatterjee. Impact of Grade Separator on Pedestrian Risk Taking Behavior. *Accident Analysis and Prevention*, Vol. 50, pp 861 – 870, 2012.
21. B. S. Panda, S. Paul: Liar's domination in graphs: Complexity and algorithm. *Discrete Applied Mathematics* 161(7-8): 1085-1092 (2013)
22. B. S. Panda, D. Pradhan: A linear time algorithm for computing a minimum paired-dominating set of a convex bipartite graph. *Discrete Applied Mathematics* 161(12): 1776-1783 (2013)
23. B. S. Panda, S. Paul: Connected Liar's domination in graphs: Complexity and Algorithms. *Discrete Math., Alg. and Appl.* 5(4) (2013)
24. B. S. Panda, D. Pushparaj Shetty: Minimum interference strong bidirectional topology for wireless sensor networks. *IJAHUC* 13(3/4): 243-253 (2013)
25. B. S. Panda, S. Paul: A linear time algorithm for liar's domination problem in proper interval graphs. *Inf. Process. Lett.* 113(19-21): 815-822 (2013)
26. B. S. Panda, D. Pradhan: Minimum paired-dominating set in chordal bipartite graphs and perfect elimination bipartite graphs. *J. Comb. Optim.* 26(4): 770-785 (2013)
27. Sharma, R. K.; Prajapati, B. Lie ideal and generalized Jordan left derivation on semiprime rings. *Ital. J. Pure Appl. Math.* No. 30 (2013), 15–22.
28. Sharma, R. K.; Yadav, Pooja Unit group of algebra of circulant matrices. *Int. J. Group Theory* 2 (2013), no. 4, 1–6.
29. Kanwar, Pramod; Sharma, R. K.; Yadav, Pooja Lie regular generators of general linear groups II. *Int. Electron. J. Algebra* 13 (2013), 91–108.
30. Gangopadhyay, Sugata; Joshi, Anand; Leander, Gregor; Sharma, R K A new construction of bent functions based on Z-bent functions. *Des. Codes Cryptogr.* 66 (2013), no. 1-3, 243–256.
31. K. Sreenadh and Sweta Tiwari, Multiple positive solutions of singular and critical elliptic problem in  $\mathbb{R}^2$  with discontinuous nonlinearities, *Nonlinear differential equations and applications*, Vol.20, n0.6 (2013), 1831-1850.
32. K. Sreenadh and Sweta Tiwari, On global multiplicity results for  $p(x)$ -Laplacian with nonlinear boundary condition, *Differential and Integral equations*, Vol.26 no.7/8, 2013, 815-836.
33. K. Sreenadh and Sweta Tiwari, On  $W^{1,p(x)}$  versus  $C^1(\bar{\Omega})$  local minimizers of functionals related to  $p(x)$ -Laplacian, *Applicable analysis*, Vol.92, no.6, 2013, 1271-1282.
34. Barman, Rupam; Kalita, Gautam On the polynomial  $x^d+ax+b$  over  $F_q$  and Gaussian hypergeometric series, *Int. J. Number Theory*, Vol. 9 (7), pp. 1753-1763, 2013
35. Barman, Rupam; Kalita, Gautam Hypergeometric functions over  $F_q$  and traces of Frobenius for elliptic curves. *Proc. Amer. Math. Soc.* Vol. 141 (10) , pp. 3403–3410, 2013.
36. Barman, Rupam Another look at Iwasawa  $\lambda$ -invariants of  $p$ -adic measures on  $(\mathbb{Z}_p)^n$  and  $\Gamma$ -transforms. *Int. J. Number Theory*, Vol. 9 (5), pp. 1289–1299, 2013.
37. Barman, Rupam; Kalita, Gautam Elliptic curves and special values of Gaussian hypergeometric series. *J. Number Theory*, Vol. 133 (9), pp. 3099–3111, 2013.
38. Chaudhary, Sudhakar; Kumar, V. V. K. Srinivas WEB-spline based mesh-free finite element analysis for the heat equation and the time-dependent Navier-Stokes equation: a survey. *Numer. Methods Partial Differential Equations* 29 (2013), no. 4, 1322–1340.
39. Radha, R.; Kumar, N. Shraavan Shift invariant spaces on compact groups. *Bull. Sci. Math.* 137 (2013), no. 4, 485–497.
40. Shraavan Kumar, N. Ideals with bounded approximate identities in the Fourier algebras on homogeneous spaces. *Indag. Math. (N.S.)* 24 (2013), no. 1, 1–14.

41. Khemchandani, Reshma; Gupta, Nishil; Chaudhary, Arpit; Chandra, Suresh Optimal execution with weighted impact functions: a quadratic programming approach. *Optim. Lett.* 7 (2013), no. 3, 575–592
42. Jayadeva, Sameena Shah, Amit Bhaya, Ravi Kothari, Suresh Chandra, “Ants find the shortest path: a mathematical proof”, *Swarm Intelligence*, Vol. 7(1), pp. 43-62, 2013.
43. Reshma Khemchandani, Anuj Karpatne and Suresh Chandra, Twin support vector regression for the simultaneous learning of function and its derivative. *International Journal of Machine Learning and Cybernetics* 4(1), 51-63, (2013).
44. Reshma Khemchandani, Anuj Karpatne and Suresh Chandra, Proximal support tensor machines. *International Journal of Machine Learning and Cybernetics* 4(4),717-725, (2013).

#### Conference Publications

1. B. Chandra, K.V Naresh Babu, New Spiking Neuron Model, *In Proc. of International Joint Conference on Neural Networks*, pp. 1-5, 2013.
2. Renu Balyan, Sudip Kumar Naskar, Antonio Toral, Niladri Chatterjee, “A Diagnostic Evaluation Approach for English to Hindi MT Using Linguistic Checkpoints and Error Rates”, *CICLing* (2) pp. 285-296, 2013.
3. Umang Gupta and Niladri Chatterjee. Personality Traits Identification Using Rough Sets Based Machine Learning. *Proceedings of ISCBI13, IEEE CS Press*, pp 182-185, 2013.
4. B S Panda, D. Pushparaj Shetty: A Local Search Based Approximation Algorithm for Strong Minimum Energy Topology Problem in Wireless Sensor Networks. *Lecture Notes in Computer Science*, Vol 7753 (2013) 398-409, Springer