

List of Publications

• Published/Accepted in Journals :

1. **D. Pradhan**, V. Sharma, R. Škrekovski, A remark on a result on odd colorings of planar graphs, **Discrete Mathematics**, 349 (2026) 115014
DOI: [10.1016/j.disc.2026.115014](https://doi.org/10.1016/j.disc.2026.115014)
2. M. A. Henning, P. V. Maniya, **D. Pradhan**, Disjunctive domination in maximal outerplanar graphs, **Discrete Applied Mathematics**, 385 (2026) 24–61
DOI: [10.1016/j.dam.2025.12.056](https://doi.org/10.1016/j.dam.2025.12.056)
3. U. K. Gupta, M. A. Henning, P. V. Maniya, **D. Pradhan**, Secure domination in P_5 -free graphs, **Discrete Mathematics**, 349 (2026) 114905
DOI: [10.1016/j.disc.2025.114905](https://doi.org/10.1016/j.disc.2025.114905)
4. F. Foucaud, P. V. Maniya, K. Paul, **D. Pradhan**, Locating-dominating partitions for some classes of graphs, **Discrete Mathematics**, 349 (2026) 114886
DOI: [10.1016/j.disc.2025.114886](https://doi.org/10.1016/j.disc.2025.114886)
5. M. A. Henning, P. V. Maniya, **D. Pradhan**, Domination number versus packing number in graphs, accepted in **Discussiones Mathematicae Graph Theory**, (2026)
DOI: [10.7151/dmgt.2624](https://doi.org/10.7151/dmgt.2624)
6. L. S. Chandran, U. K. Gupta, **D. Pradhan**, List recoloring of planar graphs, **Discrete Applied Mathematics**, 363 (2025) 71–87
DOI: [10.1016/j.dam.2024.11.031](https://doi.org/10.1016/j.dam.2024.11.031)
7. M. A. Henning, P. Maniya, **D. Pradhan**, Paired versus double domination in forbidden graph classes, **Computational and Applied Mathematics**, 44 (2025) 71
DOI: [10.1007/s40314-024-03025-6](https://doi.org/10.1007/s40314-024-03025-6)
8. U. K. Gupta, **D. Pradhan**, Strengthening Brooks' chromatic bound on P_6 -free graphs, **Discrete Applied Mathematics** 342 (2024) 334–346
DOI: [10.1016/j.dam.2023.09.031](https://doi.org/10.1016/j.dam.2023.09.031)
9. J. Chaudhary, **D. Pradhan**, Roman $\{3\}$ -domination in graphs: Complexity and algorithms, **Discrete Applied Mathematics** 354 (2024) 301–325
DOI: [10.1016/j.dam.2022.09.017](https://doi.org/10.1016/j.dam.2022.09.017)
10. D. Bakhshesh, M. A. Henning, **D. Pradhan**, Singleton coalition graph chains, **Computational and Applied Mathematics**, 43 (2024) 85
DOI: [10.1007/s40314-023-02588-0](https://doi.org/10.1007/s40314-023-02588-0)
11. P. Maniya, **D. Pradhan**, Towards the Conjecture on Domination Versus Edge Domination in Graphs, **Bulletin of Malaysian Mathematical Sciences Society**, 47 (2024) 21
DOI: [10.1007/s40840-023-01626-8](https://doi.org/10.1007/s40840-023-01626-8)

12. S. Banerjee, J. Chaudhary, **D. Pradhan**, Unique response Roman domination: Complexity and algorithms, **Algorithmica** 85 (2023) 3889–3927
DOI: [10.1007/s00453-023-01171-7](https://doi.org/10.1007/s00453-023-01171-7)
13. U. K. Gupta, S. Mishra, **D. Pradhan**, Cops and robber on subclasses of P_5 -free graphs, **Discrete Mathematics**, 346 (2023) 113353
DOI: [10.1016/j.disc.2023.113353](https://doi.org/10.1016/j.disc.2023.113353)
14. S. Paul, **D. Pradhan**, S. Verma, Vertex-edge domination in interval graphs and bipartite permutation graphs, **Discussiones Mathematicae Graph Theory**, 43 (2023) 947-963
DOI: [10.7151/dmgt.2411](https://doi.org/10.7151/dmgt.2411)
15. M. A. Henning, S. Pal, **D. Pradhan**, Hop domination in chordal bipartite graphs, **Discussiones Mathematicae Graph Theory**, 43 (2023) 825-840
DOI: [10.7151/dmgt.2403](https://doi.org/10.7151/dmgt.2403)
16. D. Bakhshesh, M. A. Henning, **D. Pradhan**, On the coalition number of trees, **Bulletin of Malaysian Mathematical Sciences Society**, 46 (2023) 95
DOI: [10.1007/s40840-023-01492-4](https://doi.org/10.1007/s40840-023-01492-4)
17. **D. Pradhan**, S. Banerjee, J.-B. Liu, Perfect Italian domination in graphs: complexity and algorithms, **Discrete Applied Mathematics**, 319 (2022) 271-295
DOI: [10.1016/j.dam.2021.08.020](https://doi.org/10.1016/j.dam.2021.08.020)
18. M. A. Henning, S. Pal, **D. Pradhan**, The semitotal domination problem in block graphs, **Discussiones Mathematicae Graph Theory**, 42 (2022) 231-248
DOI: [10.7151/dmgt.2254](https://doi.org/10.7151/dmgt.2254).
19. B. S. Panda, P. Goyal, **D. Pradhan**, Differentiating-total domination: approximation and hardness results, **Theoretical Computer Science**, 876 (2021) 45-58
DOI: [10.1016/j.tcs.2021.05.021](https://doi.org/10.1016/j.tcs.2021.05.021)
20. H. N. Kumar, **D. Pradhan**, Y. B. Venkatakrishnan, Double vertex-edge domination in graphs: complexity and algorithms, **Journal of Applied Mathematics and Computing**, 66 (2021) 245-262
DOI: [10.1007/s12190-020-01433-5](https://doi.org/10.1007/s12190-020-01433-5)
21. **D. Pradhan**, S. Pal, An $O(n+m)$ time algorithm for computing a minimum semitotal dominating set in an interval graph, **Journal of Applied Mathematics and Computing**, 66 (2021) 733-747
DOI: [10.1007/s12190-020-01459-9](https://doi.org/10.1007/s12190-020-01459-9)
22. U. K. Gupta, **D. Pradhan**, Borodin–Kostochka’s conjecture on (P_5, C_4) -free graphs, **Journal of Applied Mathematics and Computing**, 65 (2021) 877-884
DOI: [10.1007/s12190-020-01419-3](https://doi.org/10.1007/s12190-020-01419-3)
23. S. Banerjee, M. A. Henning, **D. Pradhan**, Perfect Italian domination in cographs, **Applied Mathematics and Computation**, 391 (2020) 125703 (SCI)
DOI: [10.1016/j.amc.2020.125703](https://doi.org/10.1016/j.amc.2020.125703)

24. A. Jha, **D. Pradhan**, S. Banerjee, Algorithm and hardness results on neighborhood total domination in graphs, **Theoretical Computer Science**, 840 (2020) 16–32.
DOI: [10.1016/j.tcs.2020.05.002](https://doi.org/10.1016/j.tcs.2020.05.002)
25. M. A. Henning, **D. Pradhan**, Algorithmic aspects of upper paired-domination in graphs, **Theoretical Computer Science**, 804 (2020) 98–114.
DOI: [10.1016/j.tcs.2019.10.045](https://doi.org/10.1016/j.tcs.2019.10.045)
26. S. Banerjee, M. A. Henning, **D. Pradhan**, Algorithmic results on double Roman domination in graphs, **Journal of Combinatorial Optimization**, 39 (2020) 90–114.
DOI: [10.1007/s10878-019-00457-3](https://doi.org/10.1007/s10878-019-00457-3).
27. M. A. Henning, S. Pal, **D. Pradhan**, Algorithm and hardness results on hop domination in graphs, **Information Processing Letters**, 153 (2020)
DOI: [10.1016/j.ipl.2019.105872](https://doi.org/10.1016/j.ipl.2019.105872).
28. S. Banerjee, J. Mark Keil, **D. Pradhan**, Perfect Roman domination in graphs, **Theoretical Computer Science**, 796 (2019) 1–21.
DOI: [10.1016/j.tcs.2019.08.017](https://doi.org/10.1016/j.tcs.2019.08.017).
29. A. Jha, **D. Pradhan**, and S. Banerjee, The secure domination problem in cographs, **Information Processing Letters**, 145 (2019) 30–38.
DOI: [10.1016/j.ipl.2019.01.005](https://doi.org/10.1016/j.ipl.2019.01.005).
30. **D. Pradhan** and B. S. Panda, Computing a minimum paired-dominating set in strongly orderable graphs, **Discrete Applied Mathematics**, 253 (2019) 37–50.
DOI: [10.1016/j.dam.2018.08.022](https://doi.org/10.1016/j.dam.2018.08.022).
31. S. Pal, **D. Pradhan**, The strong domination problem in block graphs and proper interval graphs, **Discrete Mathematics, Algorithms and Applications**, 11 (2019) 1950063 (**Scopus, ESCI**)
DOI: [10.1142/S1793830919500630](https://doi.org/10.1142/S1793830919500630).
32. **D. Pradhan** and A. Jha, On computing a minimum secure dominating set in block graphs, **Journal of Combinatorial Optimization**, 35 (2018) 613–631.
DOI: [10.1007/s10878-017-0197-y](https://doi.org/10.1007/s10878-017-0197-y).
33. J. Mark Keil, J. B. Mitchell, **D. Pradhan**, and M. Vatschelle, An algorithm for the maximum weight independent set problem on outerstring graphs, **Computational Geometry: Theory and Applications**, 60 (2017) 19–25.
DOI: [10.1016/j.comgeo.2016.05.001](https://doi.org/10.1016/j.comgeo.2016.05.001).
34. **D. Pradhan**, On the complexity of minimum outer-connected dominating set problem in graphs, **Journal of Combinatorial Optimization**, 31 (2016) 1–12.
DOI: [10.1007/s10878-013-9703-z](https://doi.org/10.1007/s10878-013-9703-z).
35. B. S. Panda and **D. Pradhan**, A linear time algorithm to compute a minimum restrained dominating set in proper interval graphs, **Discrete Mathematics, Algorithms and Applications**, 7(2) (2015) 1550020 (**Scopus, ESCI**)
DOI: [10.1142/S1793830915500202](https://doi.org/10.1142/S1793830915500202)

36. B. S. Panda, S. Paul, and **D. Pradhan**, Hardness results, approximation algorithms and exact algorithms for liar's domination problem in graphs, **Theoretical Computer Science**, 573 (2015) 26-42.
DOI: [10.1016/j.tcs.2015.01.041](https://doi.org/10.1016/j.tcs.2015.01.041)
37. J. Mark Keil and **D. Pradhan**, Computing a minimum outer-connected dominating set for the class of chordal graphs, **Information Processing Letters**, 113 (2013) 552-561.
DOI: [10.1016/j.ipl.2013.05.001](https://doi.org/10.1016/j.ipl.2013.05.001)
38. B. S. Panda and **D. Pradhan**, A linear time algorithm for computing a minimum paired-dominating set in convex bipartite graphs, **Discrete Applied Mathematics**, 161 (2013) 1776-1783.
DOI: [10.1016/j.dam.2012.04.014](https://doi.org/10.1016/j.dam.2012.04.014).
39. B. S. Panda and **D. Pradhan**, Minimum paired-dominating sets in chordal bipartite graphs and perfect elimination bipartite graphs, **Journal of Combinatorial Optimization**, 26 (2013) 770-785.
DOI: [10.1007/s10878-012-9483-x](https://doi.org/10.1007/s10878-012-9483-x).
40. **D. Pradhan**, Algorithmic aspects of k -tuple total domination in graphs, **Information Processing Letters**, 112 (2012) 816-822.
DOI: [10.1016/j.ipl.2012.07.010](https://doi.org/10.1016/j.ipl.2012.07.010)
41. G. J. Chang, B. S. Panda, and **D. Pradhan**, Complexity of distance paired-domination problem in Graphs, **Theoretical Computer Science** 459 (2012) 89-99.
DOI: [10.1016/j.tcs.2012.08.024](https://doi.org/10.1016/j.tcs.2012.08.024)
42. **D. Pradhan**, Complexity of certain functional variants of total domination in chordal bipartite graphs, **Discrete Mathematics, Algorithms and Applications**, 4 (3)(2012) 1250045 (**Scopus, ESCI**)
DOI: [10.1142/S1793830912500450](https://doi.org/10.1142/S1793830912500450).
43. B. S. Panda and **D. Pradhan**, Acyclic matchings in subclasses of bipartite graphs, **Discrete Mathematics, Algorithms and Applications**, 4(4) (2012) 1250050 (**Scopus, ESCI**)
DOI: [10.1142/S1793830912500504](https://doi.org/10.1142/S1793830912500504).
44. B. S. Panda and **D. Pradhan**, Locally connected spanning trees in cographs, complements of bipartite graphs and doubly chordal graphs, **Information Processing Letters**, 110 (2010) 1067-1073.
DOI: [10.1016/j.ipl.2012.07.010](https://doi.org/10.1016/j.ipl.2012.07.010)

• **Papers published in Conference Proceedings :**

1. S. Banerjee, A. Jha, **D. Pradhan**, Algorithmic aspects of neighborhood total domination in graphs, Colonge-Twente Workshop(**CTW**)-2018.
2. J. Mark Keil, J. B. Mitchell, **D. Pradhan**, and M. Vatshelle, An Algorithm for the Maximum Weight Independent Set Problem on Outerstring Graphs, Proc. of Canadian Conference on Computational Geometry (**CCCG**) 2015.