

Publication List of Basudeb Datta

(a) Research papers published in peer-reviewed Journals:

1. (with B. A. Burton and J. Spreer) Flip graphs of stacked and flag triangulations of the 2-sphere., *Electron. J. Combin.* **29(2)** (2022), #P2.6, 30 pp. MR 4406230 (arXiv:1701.05144)
2. (with D. Maity) Platonic solids, Archimedean solids and semi-equivelar maps on the sphere, *Discrete Math.* **345** (2022), 112652, 13 pp. MR 4320365 (arXiv:1804.06692)
3. (with S. Gupta) Semi-regular tilings of the hyperbolic plane, *Discrete Comput Geom.* **65** (2021), 531–553. MR 4212977 (arXiv:1806.11393)
4. (with S. Sarkar) Equilibrium triangulations of some quasitoric 4-manifolds, *Southeast Asian Bull. Math.* **44** (2020), 57–78. MR 4071504, Zbl 07235459 (arXiv:1507.07071)
5. (with D. Maity) Correction to: Semi-equivelar and vertex-transitive maps on the torus, *Beitr Algebra Geom* **61** (2020), 187–188.
6. (with D. Maity) Semi-equivelar maps on the torus and the Klein bottle are Archimedean, *Discrete Math.* **341** (2018), 3296–3309. MR 3862628, Zbl 1402.52020 (arXiv:1705.05236).
7. B. A. Burton, **B. Datta**, N. Singh and J. Spreer: A construction principle for tight and minimal triangulations of manifolds, *Experimental Math.* **27:1** (2018), 22–36. MR 3750925, Zbl 1395.57030 (arXiv:1511.04500, 1511.04500v2/anc/ListOfExamples.pdf)
8. **B. Datta** and S. Murai: On stacked triangulated manifolds, *Electronic J. Combinatorics* **24(4)** (2017), #P4.12, 14 pp. MR 3711045, Zbl 06791427 (arXiv:1407.6767v3)
9. **B. Datta** and D. Maity: Semi-equivelar and vertex-transitive maps on the torus, *Beiträge Algebra Geom.* **58** (2017), 617–634. MR 3683032, Zbl 1375.52018 (arXiv:1610.01830)
10. B. Bagchi, **B. Datta** and J. Spreer: A characterization of tightly triangulated 3-manifolds, *European J. Combin.* **61** (2017), 133–137. MR 3588713, Zbl 1352.05199 (arXiv:1601.00065)
11. B. Bagchi, **B. Datta** and J. Spreer: Tight triangulations of closed 3-manifolds, *European J. Combin.* **54** (2016), 103–120. MR 3459056, Zbl 1337.57051 (arXiv:1412.0412)

12. B. A. Burton, **B. Datta**, N. Singh and J. Spreer: Separation index of graphs and stacked 2-spheres, *J. Combin. Theory, Ser. A.* **136** (2015), 184–197. MR 3383273, Zbl 1319.05103 (arXiv:1403.5862)
13. B. Bagchi and **B. Datta**: Corrigendum to “Combinatorial triangulations of homology spheres” [Discrete Maths. 305 (2005) 1–17], *Discrete Maths.* **338** (2015), 569–570. MR 3300744, Zbl 1304.57037
14. B. Basak and **B. Datta**: Minimal crystallizations of 3-manifolds, *Electronic J. Combinatorics* **21** (1) (2014), #P1.61, 25 pp. MR 3192392, Zbl 1297.57055 (arXiv:1308.6137)
15. B. Bagchi and **B. Datta**: On stellated spheres and a tightness criterion for combinatorial manifolds, *European J. Combin.* **36** (2014), 294–313. MR 3131896, Zbl 1301.52032 (arXiv:1207.5599)
16. **B. Datta** and N. Singh: An infinite family of tight triangulations of manifolds, *J. Combin. Theory (A)* **120** (2013), 2148–2163. MR 3102179, Zbl 06243012 (arXiv:1210.1045)
17. B. Bagchi and **B. Datta**: On k -stellated and k -stacked spheres, *Discrete Math.* **313** (2013), 2318–2329. MR 3084278, Zbl 06249358 (arXiv:1208.1389)
18. B. Bagchi and **B. Datta**: Higher dimensional analogues of the map colouring problem, *Amer. Math. Monthly* **120:8** (2013), 729–733. MR 3096481, Zbl 1284.05088 (arXiv:1202.0153)
19. B. Bagchi and **B. Datta**: On polytopal upper bound spheres, *Mathematika* **50** (2013), 493–496. MR 3081783, Zbl 1272.52016 (arXiv:1207.5098)
20. B. Bagchi and **B. Datta**: A triangulation of $\mathbb{C}P^3$ as symmetric cube of S^2 , *Discrete Comput Geom.* **48** (2012), 310–329. MR 2946450, Zbl 1260.57041 (arXiv:1012.3235)
21. B. Bagchi and **B. Datta**: From the icosahedron to natural triangulations of $\mathbb{C}P^2$ and $S^2 \times S^2$, *Discrete Comput Geom.* **46** (2011), 542–560. MR 2826969, Zbl 1231.51016 (arXiv:1004.3157)
22. B. Bagchi and **B. Datta**: On Walkup’s class $\mathcal{K}(d)$ and a minimal triangulation of $(S^3 \times S^1)^{\#3}$, *Discrete Math.* **311** (2011), 989–995. MR 2787310, Zbl 1220.57014 (arXiv:0804.2153)
23. B. Bagchi and **B. Datta**: Lower bound theorems for normal pseudomanifolds, *Expositiones Math.* **26** (2008), 327–351. MR 2462440, Zbl 1165.52011 (arXiv:0802.3747)
24. **B. Datta** and N. Nilakantan: Three dimensional pseudomanifolds on eight vertices, *Int. J. Math. Math. Sci.* **2008** (2008), Art. ID 254637, 21 pages. MR 2439004, Zbl 1157.57014 (arXiv:math.GT/0701038)

25. B. Bagchi and **B. Datta**: Minimal triangulations of sphere bundles over the circle, *J. Combin. Theory (A)* **115** (2008), 737–752. MR 2417019, Zbl 1146.52007 (arXiv:math.GT/0610829)
26. B. Bagchi and **B. Datta**: Uniqueness of Walkup’s 9-vertex 3-dimensional Klein bottle, *Discrete Math.* **308** (2008), 5087–5095. MR 2450446, Zbl 1164.57009 (arXiv:math.GT/0610825)
27. **B. Datta** and A. K. Upadhyay: Degree-regular triangulations of the double-torus, *Forum Math.* **18** (2006), 1011–1025. MR 2278612, Zbl 1133.57015 (arXiv:math.AT/0508106)
28. B. Bagchi and **B. Datta**: Combinatorial triangulations of homology spheres, *Discrete Maths.* **305** (2005), 1–17. MR 2186679, Zbl 1085.57019 (arXiv:math.GT/0506536)
29. **B. Datta**: A note on the existence of $\{k, k\}$ -equivelar polyhedral maps, *Beiträge Alg. Geom.* **46** (2005), 537–544. MR 2196935, Zbl 1153.52303 (arXiv:math.GT/0506618)
30. **B. Datta** and A. K. Upadhyay: Degree-regular triangulations of torus and Klein bottle, *Proc. Indian Acad. Sci. (Math. Sci.)* **115** (2005), 279–307. MR 2161733, Zbl 1093.52007 (arXiv:math.GT/0403433)
31. B. Bagchi and **B. Datta**: Non-existence of 6-dimensional pseudomanifolds with complementarity, *Advances in Geometry* **4** (2004), 537–550. MR 2096527, Zbl 1069.57012 (arXiv:math.GT/0404225)
32. U. Brehm, **B. Datta** and N. Nilakantan: The edge-minimal polyhedral maps of Euler characteristic -8 , *Beiträge Algebra Geom.* **43** (2002), 583–596. MR 2003j: 52013, Zbl 1017.52010
33. **B. Datta** and N. Nilakantan: Two dimensional weak pseudomanifolds on eight vertices, *Proc. Indian Acad. Sci. (Math. Sci.)* **112** (2002), 257–281. MR 2003c: 57022, Zbl 1008.57018
34. **B. Datta** and N. Nilakantan: Equivelar polyhedra with few vertices, *Discrete Comput Geom.* **26** (2001), 429–461. MR 2003c: 52012, Zbl 1004.51028
35. B. Bagchi and **B. Datta**: A short proof of the uniqueness of Kühnel’s 9-vertex complex projective plane, *Adv. in Geom.* **1** (2001), 157–163. MR 2002f: 57052, Zbl 978.57021
36. **B. Datta**: Two dimensional weak pseudomanifolds on seven vertices, *Bol. Soc. Mat. Mexicana* **5** (1999), 419–426. MR 2000i: 57041, Zbl 949.52002
37. **B. Datta**: Pseudomanifolds with complementarity, *Geometriae Dedicata* **73** (1998), 143–155. MR 99h: 57045, Zbl 913.57014

38. B. Bagchi and **B. Datta**: A structure theorem for pseudomanifolds, *Discrete Maths.* **188** (1998), 41–60. MR 99f: 57027, Zbl991.62436
39. **B. Datta**: A discrete isoperimetric problem, *Geometriae Dedicata* **64** (1997), 55–68. MR 97m: 52033, Zbl876.52001
40. **B. Datta**: Combinatorial manifolds with complementarity, *Proc. Indian Acad. Sci. (Math. Sci.)* **104** (1994), 385–388. MR 95g: 57035, Zbl823.57015
41. B. Bagchi and **B. Datta**: On Kühnel’s 9-vertex complex projective plane, *Geometriae Dedicata* **50** (1994), 1–13. MR 95f: 52019, Zbl808.52013
42. **B. Datta**: (1,2)-symplectic structures, nearly Kähler structures and S^6 , *J. Indian Math Soc.* **60** (1994), 171–190. MR 95g: 53037, Zbl881.53022
43. **B. Datta**: Fueter and hypercomplex structures on smooth manifolds, *SEA Bull. Math.* **17** (1993), 127–137. MR 95c: 53057, Zbl802.58067
44. **B. Datta** and S. Subramanian: Non-existence of almost complex structures on products of even dimensional spheres, *Topology & Appl.* **36** (1990), 39–42. MR 91k: 57030, Zbl711.53030
45. **B. Datta** and S. Nag: Zero-sets of quaternionic and octonionic analytic functions with central coefficients, *Bull. London Math. Soc.* **19** (1987), 329–336. MR 89j: 30066, Zbl596.30062
46. S. Nag, J. A. Hillman and **B. Datta**: Characterisation theorems for compact hypercomplex manifolds, *J. Australian Math. Soc. (A)* **43** (1987), 231–245. MR 88j: 32038, Zbl646.30040
47. **B. Datta**: Characterisation of Fueter mappings and their Jacobians, *Indian J. of Pure and Appl. Maths.* **18** (1987), 201–214. MR 88e: 30119, Zbl631.30040

(b) Survey articles published in Journals:

48. **B. Datta**: Minimal triangulations of manifolds, *J. Indian Institute of Science* **87** (2007), 429–449. MR 2392107 (arXiv:math/0701735)

(c) Research articles published in Conference Proceedings :

49. B. Bagchi, B. A. Burton, **B. Datta**, N. Singh and J. Spreer: Efficient algorithms to decide tightness, *32nd International Symposium on Computational Geometry (SoCG 2016)*. In: *Leibniz Int. Proceedings in Informatics (LIPICS)* **51** (2016) 12:1–12:15. MR 3540855, Zbl06832269 (arXiv:1412.1547)

(d) Chapters contributed to books:

50. **B. Datta:** Minimal triangulation, complementarity and projective planes. In: *Geometry from the Pacific Rim* (ed.: A. J. Berrick *et al.*), pp. 77–84, Walter de Gruyter & Co., Berlin · New York, 1997. MR 98j: 57035, Zbl 886.57014

(e) Articles published in journals of science educations/for students:

51. **B. Datta:** Multiplication on \mathbb{R}^n , Part I: Division algebra and vector product, *Resonance*, **3** (1) (1998), 8–14.
52. **B. Datta:** Multiplication on \mathbb{R}^n , Part II: Adams’ theorem and applications, *Resonance*, **3** (2) (1998), 8–15.
53. **B. Datta:** Triangulations of projective spaces, *Mathematics Student* **82** (2013), 103–116. MR 3156993

(f) Educational articles published in Conference Volumes:

54. **B. Datta:** An Introduction to Fundamental Groups, Proceedings of the Twentieth Annual Conference (held at Calicut) of the *Ramanujan Mathematical Society* - 2005, pp. 107–116.

(g) Extended abstracts:

55. **B. Datta:** On stellated spheres and a tightness criterion for combinatorial manifolds, *Oberwolfach Reports*, No. 08/2011, 31–32 (2011). DOI: 10.4171/OWR/2011/08.

(h) Other arXiv articles:

56. **B. Datta** and N. Singh: Tight triangulations of some 4-manifolds. arXiv:1207.6182, 8 pages.
57. **B. Datta:** Tight and stacked triangulations of manifolds. arXiv:1506.00447, 8 pages.
58. **B. Datta** and D. Kulkarni: Minimal contact triangulations of 3-manifolds. arXiv:1608.03823, 19 pages.