

# Ciprian Manolescu

## Publication List

1. From knots to four-manifolds, to appear in *Proceedings of the International Congress of Mathematicians*, Philadelphia (2026)
2. Canonical orientations in Heegaard Floer theory (with M. Abouzaid), preprint (2025), arXiv:2510.20062
3. Real Heegaard Floer homology (with G. Guth), preprint (2025), arXiv:2504.09034
4. A knot Floer stable homotopy type (with S. Sarkar), preprint (2021), arXiv:2108.13566
5. New knot invariants from BPS states (with S. Gukov), to appear in *Proceedings of the 2025 ICBS*
6. Humanity's Last Exam (with L. Phan et al.), eprint (2025), arXiv:2501.14249
7. Triangulations and Floer homology, to appear in *Proceedings of the 2024 ICBS*
8. Searching for ribbons with machine learning (with S. Gukov, J. Halverson and F. Ruehle), *Machine Learning: Science and Technology*, **6** (2025), 025065
9. A Rasmussen invariant for links in  $\mathbb{RP}^3$  (with M. Willis), *Transactions of the American Mathematical Society* **12** (2025), 789–830
10. Heegaard Floer homology and integer surgeries on links (with P. Ozsváth), *Geometry & Topology* **29** (2025), 2783–3062
11. Grid diagrams and Heegaard Floer invariants (with P. Ozsváth and D. Thurston), *Annals of Mathematics* **201** (2025), 1–78
12. Skein lasagna modules and handle decompositions (with K. Walker and P. Wedrich), *Advances in Mathematics*, **425** (2023), Paper No. 109071
13. Quantum Field Theory and Manifold Invariants (book co-edited with D. Freed, S. Gukov, C. Teleman, and U. Tillmann), *IAS/Park City Mathematics Series* **28** (2021)
14. Four-dimensional topology, in *Literature and History of Mathematical Science*, CMSA Series in Mathematics, **3** (2024), 415–438
15. From zero surgeries to candidates for exotic definite four-manifolds (with L. Piccirillo), *Journal of the London Mathematical Society*, **108** (2023), 2001–2036
16. Relative genus bounds in indefinite four-manifolds (with M. Marengon and L. Piccirillo), *Mathematische Annalen*, **390** (2024), 1481–1506
17. Skein lasagna modules for 2-handlebodies (with I. Neithalath), *Journal für die Reine und Angewandte Mathematik*, **788** (2022), 37–76
18. A generalization of Rasmussen's invariant, with applications to surfaces in some four-manifolds (with M. Marengon, S. Sarkar and M. Willis), *Duke Mathematical Journal* **172** (2023), 231–311
19. A two-variable series for knot complements (with S. Gukov), *Quantum Topology* **12** (2021), 1–109
20. A sheaf-theoretic  $SL(2, \mathbb{C})$  Floer homology for knots (with L. Côté), *Proceedings of the London Mathematical Society* **119** (2019), 1336–1387

21. The Knight Move Conjecture is false (with M. Marengon), *Proceedings of the American Mathematical Society* **148** (2020), 435–439
22. Homology cobordism and triangulations, in *Proceedings of the International Congress of Mathematicians*, Rio de Janeiro (2018), Vol. 2, 1175–1192
23. A sheaf-theoretic model for  $SL(2, \mathbb{C})$  Floer homology (with M. Abouzaid), *Journal of the European Mathematical Society* **22** (2020), 3641–3695
24. Involutive Heegaard Floer homology and plumbed three-manifolds (with I. Dai), *Journal of the Institute of Mathematics of Jussieu* **18** (2019), 1115–1155
25. A connected sum formula for involutive Heegaard Floer homology (with K. Hendricks and I. Zemke), *Selecta Mathematica* **24** (2018), 1183–1245
26. Floer homology and covering spaces (with T. Lidman), *Geometry & Topology*, **22** (2018), 2817–2838
27. The equivalence of two Seiberg-Witten Floer homologies (with T. Lidman), *Astérisque*, **399** (2018)
28. Lectures on the triangulation conjecture, in *Proceedings of the Gökova Geometry / Topology Conference 2015*, Gökova (2016), 1–38
29. Involutive Heegaard Floer homology (with K. Hendricks), *Duke Mathematical Journal*, **166** (2017), 1211–1299
30. Floer theory and its topological applications, *Japanese Journal of Mathematics*, **10** (2015), 105–133
31. Triangulations of manifolds, *Notices of the International Congress of Chinese Mathematicians*, **2** (2014), no. 2, 21–23
32. An introduction to knot Floer homology, in *Physics and mathematics of link homology*, *Contemp. Math.* **680**, AMS (2016), 99–135
33. Cornered Heegaard Floer homology (with C. Douglas and R. Lipshitz), *Memoirs of the American Mathematical Society*, **262** (2019), no. 1266
34. The Conley index, gauge theory, and triangulations, *Journal of Fixed Point Theory and Applications* **13** (2013), 431–457
35. On the intersection forms of spin four-manifolds with boundary, *Mathematische Annalen* **359** (2014), 695–728
36. A generalized asynchronous computability theorem (with E. Gafni and P. Kuznetsov), in *Proceedings of the 2014 ACM Symposium on Principles of Distributed Computing (PODC '14)*, ACM, New York (2014), 222–231
37.  $\text{Pin}(2)$ -equivariant Seiberg-Witten Floer homology and the Triangulation Conjecture, *Journal of the American Mathematical Society* **29** (2016), 147–176
38. Grid diagrams in Heegaard Floer theory, in *European Congress of Mathematics, Kraków, 2-7 July, 2012*, European Mathematical Society (2013), 643–657
39. An untwisted cube of resolutions for knot Floer homology, *Quantum Topology* **5** (2014), 185–223
40. On the algebra of cornered Floer homology (with C. Douglas), *Journal of Topology* **7** (2014), 1–68
41. Floer homology on the extended moduli space (with C. Woodward), in *Perspectives in Analysis, Geometry and Topology: On the Occasion of the 60th Birthday of Oleg Viro*, *Progress in Mathematics* **296**, Birkhäuser / Springer (2012), 283–329

42. A combinatorial description of knot Floer homology (with P. Ozsváth and S. Sarkar), *Annals of Mathematics* **169** (2009), 633–660
43. Combinatorial cobordism maps in Heegaard Floer theory (with R. Lipshitz and J. Wang), *Duke Mathematical Journal* **145** (2008), 207–247
44. On the Khovanov and knot Floer homologies of quasi-alternating links (with P. Ozsváth), in *Proceedings of the Gökova Geometry / Topology Conference 2007*, Gökova (2008), 60–81
45. On combinatorial link Floer homology (with P. Ozsváth, D. Thurston and Z. Szabó), *Geometry and Topology* **11** (2007), 2339–2412
46. An unoriented skein exact triangle for knot Floer homology, *Mathematical Research Letters* **14** (2007), 839–852
47. Link homology theories from symplectic geometry, *Advances in Mathematics* **211** (2007), 363–416
48. A concordance invariant from the Floer homology of double branched covers (with B. Owens), *International Mathematics Research Notices* **2007**, doi:10.193/imrn/rnm077
49. A gluing theorem for the relative Bauer-Furuta invariants, *Journal of Differential Geometry* **76** (2007), 117–153
50. Nilpotent slices, Hilbert schemes, and the Jones polynomial, *Duke Mathematical Journal* **132** (2006), 311–369
51. Periodic Floer pro-spectra from the Seiberg-Witten equations (with P.B. Kronheimer), eprint (2002), arXiv:math/0203243
52. Seiberg-Witten-Floer stable homotopy type of 3-manifolds with  $b_1 = 0$ , *Geometry and Topology* **7** (2003), 889–932