Sucharit Sarkar

Curriculum Vitae

Contact

UCLA Department of Mathematics	*Phone:*	310-825-4048 (office)
520 Portola Plaza, Box 951555	*E-mail:*	sucharit@math.ucla.edu
Los Angeles, CA 90095-1555	*Website:*	math.ucla.edu/∼sucharit

Interests

Low dimensional topology, symplectic geometry, and algebraic topology, with particular interest in knot theory, Heegaard Floer homology, and Khovanov homology.

Education

Ph.D. in Mathematics, Princeton University.	2005 – 2009
Bachelor of Mathematics, Indian Statistical Institute.	2002 – 2005

Employment

Professor, University of California at Los Angeles.	2021 –
Associate Professor, University of California at Los Angeles.	2016 – 2021
Assistant Professor, Princeton University.	2012 – 2016
Clay Research Fellow, Clay Mathematics Institute.	2009 – 2013
Ritt Assistant Professor, Columbia Univeristy.	2009 – 2012

Visiting positions

Simons Center for Geometry and Physics.	November, 2012
Mathematical Sciences Research Institute.	Spring, 2010

Awards and honors

Sorgenfrey Distinguished Teaching Award, UCLA.	2020
Invited talk at International Congress of Mathematics, Brazil.	2018
CAREER Grant, National Science Foundation.	2014 – 2020
Clay Research Fellowship, Clay Mathematics Institute.	2009 – 2013
Honorific Fellowship, Princeton University.	2008 – 2009
Centennial Fellowship, Princeton University.	2005 – 2009
S. H. Aravind Gold Medal, Indian Statistical Institute.	2005
KVPY scholarship, Govt. of India.	2002 – 2005
Gold and silver medals, International Mathematical Olympiads.	2001 – 2002

Journals

Editor, *Selecta Mathematica*.	2020 –
Board member, *Pacific Journal of Mathematics*.	2018 –

Selected papers

1. (Lipshitz-Sarkar) *Spatial refinements and Khovanov homology.* Proc. of the ICM (2018)
2. (Lipshitz-Sarkar) *A Khovanov stable homotopy type.* J. Amer. Math. Soc. (2014)
3. (Sarkar-Wang) *An algorithm for computing some Heegaard Floer homologies.* Ann. of Math. (2010)
4. (Manolescu-Ozsvath-Sarkar) *A combinatorial description of knot Floer homology.* Ann. of Math. (2009)

Other publications

5. (Cheng-Hedden-Sarkar) *Murasugi sum and extremal knot Floer homology.* Quantum Topol.
6. (Lipshitz-Sarkar) *Khovanov homology of strongly invertible knots and their quotients.* Proc. Sympos. Pure Math. (2024)
7. (Manolescu-Marengon-Sarkar-Willis) *A generalization of Rasmussen's invariant, with applications to surfaces in some four-manifolds.* Duke Math. J. (2023)
8. (Lawson-Lipshitz-Sarkar) *Khovanov spectra for tangles.* J. Inst. Math. Jussieu (2023)
9. (Lipshitz-Sarkar) *A mixed invariant of non-orientable surfaces in equivariant Khovanov homology.* Trans. Amer. Math. Soc. (2022)
10. (Lawson-Lipshitz-Sarkar) *Homotopy functoriality for Khovanov spectra.* J. Topol. (2022)
11. (Lipshitz-Sarkar) *Khovanov homology detects split links.* Amer. J. Math. (2022)
12. (Lawson-Lipshitz-Sarkar) *Chen-Khovanov spectra for tangles.* Michigan Math. J. (2022)
13. (Sarkar) *Ribbon distance and Khovanov homology.* Algebr. Geom. Topol. (2020)
14. (Hendricks-Lipshitz-Sarkar) *Correction to the paper "A flexible construction of equivariant Floer homology and applications".* J. Topol. (2020)
15. (Sarkar-Scaduto-Stoffregen) *An odd Khovanov homotopy type.* Adv. Math. (2020)
16. (Hendricks-Lipshitz-Sarkar) *A simplicial construction of G-equivariant Floer homology.* Proc. London Math. Soc. (2020)
17. (Lawson-Lipshitz-Sarkar) *Khovanov homotopy type, Burnside category, and products.* Geom. Topol. (2020)
18. (Sarkar) *Phutball draws.* Games of No Chance 5 (2019)
19. (Baldwin-Levine-Sarkar) *Khovanov homology and knot Floer homology for pointed links.* J. Knot Theory Ramifications (2017)
20. (Lawson-Lipshitz-Sarkar) *The cube and the Burnside category.* Contemp. Math. (2017)
21. (Sarkar-Seed-Szabo) *A perturbation of the geometric spectral sequence in Khovanov homology.* Quantum Topol. (2017)
22. (Hendricks-Lipshitz-Sarkar) *A flexible construction of equivariant Floer homology and applications.* J. Topol. (2016)
23. (Everitt-Lipshitz-Sarkar-Turner) *Khovanov homotopy types and the Dold-Thom functor.* Homology Homotopy Appl. (2016)
24. (Lipshitz-Ng-Sarkar) *On transverse invariants from Khovanov homology.* Quantum Topol. (2015)
25. (Sarkar) *Moving basepoints and the induced automorphisms of link Floer homology.* Algebr. Geom. Topol. (2015)
26. (Lipshitz-Sarkar) *A refinement of Rasmussen's s-invariant.* Duke Math. J. (2014)
27. (Lipshitz-Sarkar) *A Steenrod square on Khovanov homology.* J. Topol. (2014)
28. (Hedden-Juhasz-Sarkar) *On sutured Floer homology and the equivalence of Seifert surfaces.* Algebr. Geom. Topol. (2013)
29. (Sarkar) *Grid diagrams and shellability.* Homology Homotopy Appl. (2012)
30. (Sarkar) *Grid diagrams and the Ozsvath-Szabo tau-invariant.* Math. Res. Lett. (2011)
31. (Sarkar) *A note on sign conventions in link Floer homology.* Quantum Topol. (2011)
32. (Sarkar) *Maslov index formulas for Whitney n-gons.* J. Symplectic Geom. (2011)
33. (Sarkar) *Commutators and squares in free groups.* Algebr. Geom. Topol. (2004)

Preprints

34. (Manolescu-Sarkar) *A knot Floer stable homotopy type.*