

Sucharit Sarkar

Curriculum Vitae

Contact

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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
Topics in Heegaard Floer homology.
Advisor: Zoltán Szabó
Bachelor of Mathematics, Indian Statistical Institute. 2002 – 2005

Employment

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

Visiting positions

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

Awards and honors

Invited talk at International Congress of Mathematics, Brazil. 2018
CAREER Grant, National Science Foundation. 2014 –
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

Selected papers

1. (With Robert Lipshitz) *A Khovanov stable homotopy type*. Journal of the American Mathematical Society **27** (2014)
2. (With Jiajun Wang) *An algorithm for computing some Heegaard Floer homologies*. Annals of Mathematics **171** (2010)
3. (With Ciprian Manolescu and Peter Ozsváth) *A combinatorial description of knot Floer homology*. Annals of Mathematics **169** (2009)

Other publications

4. (With Cotton Seed and Zoltán Szabó) *A perturbation of the geometric spectral sequence in Khovanov homology*. To appear in Quantum Topology
5. (With Tyler Lawson and Robert Lipshitz) *The cube and the Burnside category*. AMS Contemporary Mathematics Series Vol **684** (2017)
6. (With John Baldwin and Adam Levine) *Khovanov homology and knot Floer homology of pointed links*. Journal of Knot Theory and its Ramifications **26** (2017)
7. (With Kristen Hendricks and Robert Lipshitz) *A flexible construction of equivariant Floer homology and applications*. Journal of Topology **9** (2016)
8. (With Brent Everitt, Robert Lipshitz, and Paul Turner) *Khovanov homotopy types and the Dold-Thom functor*. Homology, Homotopy and Applications **18** (2016)
9. (With Robert Lipshitz and Lenhard Ng) *On transverse invariants from Khovanov homology*. Quantum Topology **6** (2015)
10. *Moving basepoints and the induced automorphisms of link Floer homology*. Algebraic and Geometric Topology **15** (2015)
11. (With Robert Lipshitz) *A refinement of Rasmussen's s -invariant*. Duke Mathematical Journal **163** (2014)
12. (With Robert Lipshitz) *A Steenrod square on Khovanov homology*. Journal of Topology **7** (2014)
13. (With Matthew Hedden and András Juhász) *On sutured Floer homology and the equivalence of Seifert surfaces*. Algebraic and Geometric Topology **13** (2013)
14. *Grid diagrams and shellability*. Homology, Homotopy and Applications **14** (2012)
15. *Grid diagrams and the Ozsváth-Szabó tau-invariant*. Mathematical Research Letters **18** (2011)
16. *A note on sign conventions in link Floer homology*. Quantum Topology **2** (2011)
17. *Maslov index formulas for Whitney n -gons*. Journal of Symplectic Geometry **9** (2011)
18. *Commutators and squares in free groups*. Algebraic and Geometric Topology **4** (2004)

Preprints

19. (With Tyler Lawson and Robert Lipshitz) *Khovanov spectra for tangles*. Preprint arXiv 1706.02346

20. (With Kristen Hendricks and Robert Lipshitz) *A simplicial construction of G -equivariant Floer homology*. Preprint arXiv 1609.09132
21. (With Tyler Lawson and Robert Lipshitz) *Khovanov homotopy type, Burnside category, and products*. Preprint arXiv 1505.00213