Daniel Pomerleano

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Research Interests

Mirror symmetry, especially aspects related to noncommutative Hodge theory and symplectic topology.

Appointments held

2014-	EPSRC Postdoctoral Fellowship, Imperial College London
2012-2014	Postdoctoral Researcher, Kavli IPMU, University of Tokyo

Education

2012	PhD in Mathematics, University of California, Berkeley
2007	B.A. in Mathematics, University of Pennsylvania

Publications and Preprints

2007	Gluck, H., DeTurck, D., Pomerleano, D., Vela-Vick, S., *The Four-vertex theorem and its converse*, Notices of the AMS, Vol. 54, 192–207.
2012	Pomerleano, D., *Curved String topology and tangential Fukaya categories*, Proc. Symp. Pure Math. 85, 409-422.
2012	Pomerleano,D., *Curved String topology and tangential Fukaya categories II*. PhD dissertation. *available from arxiv and author's website.*
2013	Lin, K.H., Pomerleano, D., *Global Matrix Factorizations*, Math Research Letters, Vol. 20, 91-106.
2015	Halpern-Leistner, D., Pomerleano,D., *Equivariant Hodge theory and noncommutative geometry* , 46 pages, arxiv:1507.01924, *under review at Duke Math Journal since 4/2016.*
2015	Pomerleano, D., *On the homological algebra of relative symplectic geometry*, 25 pages, *submitted to the Proceedings of the workshop "Primitive Forms and Related Subjects".*
2016	Chan,K., Pomerleano, D., Ueda,K., *Lagrangian torus fibrations and homological mirror symmetry for the conifold*, Comm. Math. Phys. 341 (2016), no. 1, 135-178
2016	Chan, K., Pomerleano, D., Ueda,K., *Lagrangian sections on mirrors of toric Calabi-Yau 3-folds*, 62 pages, arxiv:1602.07075, *preprint available from author's website.*
2016	Ganatra, S., Pomerleano, D., *A log PSS map with applications to Lagrangian embeddings*, 56 pages, arxiv:1611.06849, *preprint available from author's website.*
2016	Ganatra S., Pomerleano, D. *Remarks on symplectic cohomology of smooth divisor complements*, 19 pages, *draft available from author's website.*

Awards

2014   EPSRC Postdoctoral Fellowship
2012   Chauvenet Prize of the AMS (shared with D. DeTurck, H. Gluck, and S. Vela-Vick)

Invited Talks

2016   *A log PSS map and Lagrangian embedding problems.* HMS seminar, UPenn.
2015   *Noncommutative Hodge theory for Quotient stacks*, Univ. of Sheffield AG seminar.
2015   *Symplectic cohomology in the topological limit*, Warwick HMS conference.
2015   *Symplectic cohomology in the topological limit*, Univ. of Cambridge.
2015   *Noncommutative Hodge theory for Quotient stacks*, Stanford topology seminar
2015   *Symplectic cohomology in the topological limit*, Harvard gauge theory seminar
2015   *Symplectic cohomology in the topological limit*, Univ. of Oxford
2015   *SYZ mirror symmetry for toric Calabi-Yau threefolds*, IHP
2014   *Noncommutative Hodge theory for Quotient stacks*, Warwick symp. on Derived Categories
2014   *Noncommutative Hodge for Quotient stacks*, COW Seminar
2013   *A gentle introduction to mirror symmetry*, CUNY Einstein Chair seminar
2013   *SYZ mirror symmetry for the conifold*, Stanford symplectic seminar
2012   *Matrix factorizations on non-affine varieties*, Workshop on Lie theory and AG, CUHK
2012   *Conifold transitions and matrix factorizations*, Caltech Algebraic Geometry Seminar
2012   *Curved string topology.*, Notre Dame FRG Conference on TQFT
2012   *Matrix Factorizations, Topological Field theories, and Mirror Symmetry*, Simons' Center
2012   *Curved string topology*, CUNY Einstein Chair seminar
2011   *Curved string topology*, UC Berkeley Topology Seminar
2011   *Global Matrix factorizations*, UC Berkeley Commutative Algebra Seminar

Teaching

Imperial

2016   Fourth year course on Differential topology
2015   Fourth year course Differential topology

Berkeley

2012   RTG summer research program for undergraduates (Homological algebra)
2009   Sole instructor for a summer class on "Analytic geometry and calculus" (Math 16a)
2008   Sole instructor for a summer class on "Analytic geometry and calculus" (Math 16a)

Professional Activities

Referee for *Compositio, Geometry and Topology, Journal of Algebra and Its Applications*