Ipsita Datta

Curriculum Vitae

ETH Zürich, Department of Mathematics
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Positions

2023-	**Hermann-Weyl Instructor**, *ETH*, Zürich, Switzerland
2021-23	**Member**, *Institute for Advanced Study*, Princeton, USA

Education

2016-2021	**Ph.D.**, *Department of Mathematics, Stanford University*, Stanford, USA Advisor : Prof. Yakov Eliashberg, Thesis title: Lagrangian Cobordisms between Enriched Knot Diagrams
2014-2016	**M.Math.**, *Indian Statistical Institute*, Kolkata, India First division with distinction
2011-2014	**B.Math. (Hons.)**, *Indian Statistical Institute*, Bangalore, India Honours with distinction
2011	**Class 12 CBSE** , *Kendriya Vidyalaya IISc*, Bangalore, India Ranked among top 1% in India
2009	**Class 10 CBSE**, *Kendriya Vidyalaya IISc*, Bangalore, India Ranked among top 1% in India

Awards and Honors

2020-21	**Maryam Mirzakhani Graduate Fellowship**, *Stanford University*, California, USA
Summer 2013	**Visiting Students' Research Programme (VSRP)**, *School of Mathematics, Tata Institute of Fundamental Research*, Mumbai, India
2011-2016	**INSPIRE Scholarship**, *Department of Science and Technology, Government of India*
2011	**Scored top 1% aggregate marks**, *Class 10 and Class 12 examinations conducted by Central Board of Secondary Education (CBSE), India*

Preprints and Publications

2023	**Weinstein Presentations for High-dimensional Antisurgery**, *(with Chindu Mohanakumar, Oleg Lazarev, and Angela Wu)* arXiv:2310.03133, `https://arxiv.org/abs/2310.03133`

2022 **Contact Homology and Higher Dimensional Closing Lemmas**, *(with Julian Chaidez, Rohil Prasad, and Shira Tanny)*, Accepted for publication in Journal of Modern Dynamics, Volume 19, 2023
arXiv:2206.04738, `https://arxiv.org/abs/2206.04738`

2021 **Lagrangian Cobordisms between Enriched Knot Diagrams**, Symplectic Geometry, Vol 21 (2023) Issue no. 1, pp. 159-234
arXiv:2112.10015, `https://arxiv.org/pdf/2112.10015.pdf`

2020 **A Polyfold Proof of Gromov's Non-squeezing Theorem**, *(with Franziska Beckschulte, Irene Seifert, Anna-Maria Vocke, and Katrin Wehrheim)*, Research Directions in Symplectic and Contact Geometry and Topology, 2021, eBook ISBN 978-3-030-80979-9, Print ISBN 978-3-030-80978-2, pp. 1-45
arXiv:2010.07248, `https://arxiv.org/abs/2010.07248`

Teaching experience

ETH Zürich

Spr 2024 **401-3582-24L Morse Homology**, *Instructor*

Stanford University

Win 2021 **Math 257A: Symplectic Geometry and Topology**, *Course assistant, Graduate Course*

Win 2021 **Math 243: Functions of Several Complex Variables**, *Course assistant, Graduate Course*

Sum 2020 **Math 53: Ordinary Differential Equations with Linear Algebra**, *Course assistant, Undergraduate Course*

Spr 2020 **Math 106: Applied Complex Analysis**, *Course assistant, Undergraduate Course*

Fall 2019 **Math 21: Calculus**, *Teaching assistant, Undergraduate Course*

Sum 2019 **Math 115: Functions of a Real Variable**, *Course assistant, Undergraduate Course*

Spr 2019 **Math 21: Calculus**, *Teaching assistant, Undergraduate Course*

Fall 2018 **Math 19: Calculus**, *Course assistant, Undergraduate Course*

Spr 2018 **Math 104: Applied Matrix Theory**, *Course assistant, Undergraduate Course*

Fall 2017 **Math 51: Linear Algebra, Multivariable Calculus, and Modern Applications**, *Teaching assistant, Undergraduate Course*

Spr 2016 **Math 20: Calculus**, *Course assistant, Undergraduate Course*

Fall 2016 **Math 115: Functions of a Real Variable**, *Course assistant, Undergraduate Course*

Talks

Dec 01, 2023	**Lagrangian cobordisms, enriched knot diagrams, and algebraic invariants**, *Symplectix seminar*, Institut Henri Poincaré, Paris
Nov 13, 2023	**Lagrangian cobordisms, enriched knot diagrams, and algebraic invariants**, *Symplectic Geometry seminar*, ETH Zürich
Mar 09, 2023	**Lagrangian cobordisms between enriched knot diagrams**, *Symplectic Geometry seminar*, Simons Center for Geometry and Physics, Stony Brook
Feb 23, 2023	**What is a Pseudoholomorphic Curve?**, *What is...? seminar*, IAS, Princeton
Feb 13, 2023	**Lagrangian cobordisms between enriched knot diagrams**, *USC Topology seminar*, University of Southern California, Los Angeles
Jan 05, 2023	**Lagrangian cobordisms, enriched knot diagrams, and algebraic invariants**, *Indian Statistical Institute*, Kolkata
Jan 03, 2023	**Introduction to Symplectic Geometry and Pseudoholomorphic Curves**, *Indian Statistical Institute*, Kolkata
Nov 04, 2022	**Lagrangian Cobordisms, Enriched Knot Diagrams, and Algebraic Structures**, *Montreal/PU/IAS/Tel-Aviv/Paris Symplectic Zoominar*, Virtual
Oct 21, 2022	**Lagrangian Cobordisms, Enriched Knot Diagrams, and Algebraic Structures**, *Symplectic Geometry, Gauge Theory, and Categorification seminar*, Columbia University, New York City
Oct 13, 2022	**Lagrangian Cobordisms, Enriched Knot Diagrams, and Algebraic Structures**, *Symplectic Seminar*, MIT, Boston
Sept 28, 2022	**Lagrangian Cobordisms, Enriched Knot Diagrams, and Algebraic Structures**, *Geometry and Topology Seminar*, Louisiana State University, Baton Rouge
Sept 22, 2022	**(Algebraic) Invariants from Geometry**, *Short talks by Postdoctoral Members*, Institute for Advanced Study, Princeton
Sept 02, 2022	**Lagrangian Cobordisms, Enriched Knot Diagrams, and Algebraic Structures**, *Western Hemisphere Virtual Symplectic Seminar*, Virtual
Mar 23, 2022	**Lagrangian Cobordisms and Enriched Knot Diagrams**, *Geometry and Topology Seminar*, Indian Institute of Science, Virtual
Feb 21, 2022	**Lagrangian Cobordisms and Enriched Knot Diagrams**, *Geometry and Topology Seminar*, University of Maryland, College Park
Nov 16, 2021 Nov 23, 2021	**Lagrangian Cobordisms and Enriched Knot Diagrams**, *PACT Seminar*, Bryn Mawr College, Virtual, (two-part talk)
Nov 8, 2021	**Lagrangian Cobordisms and Enriched Knot Diagrams**, *Institute for Advanced Study/Princeton University Joint Symplectic Seminar*, Princeton

Sept 23, 2021 **Lagrangian Cobordisms and Enriched Knot Diagrams**, *Short talks by Postdoctoral Members*, Institute for Advanced Study, Princeton

Apr 19, 2021 **Obstructions to the existence of Lagrangians in $\mathbb{R}^4$**, *Geometry, Topology, and Categorification seminar*, University of Southern California , Virtual

Nov 18, 2020 **Obstructions to the existence of Lagrangians in $\mathbb{R}^4$**, *Heidelberg Symplectic Geometry Seminar*, Virtual

Conference and Workshop Talks

Aug 26, 2023 **Minicourse on Gromov-Witten Invariants**, *Precourse at Workshop on Symplectic Field Theory 10*, Humboldt Universität, Berlin

Sept 09, 2022 **Obstructions to the Existence of Lagrangian Cobordisms**, *Connections Workshop: Floer Homotopy Theory*, MSRI, Berkeley

Feb 23, 2022 **Quantitative Heegaard Floer cohomology and the Calabi invariant [CGHMSS] Part III: Background on Heegaard-Floer**, *Special Year Seminar - Math - Topics in Geometry*, Institute for Advanced Study

Dec 06, 2020 **Obstructions to the existence of Lagrangians in $\mathbb{R}^4$**, *Tech Topology Conference*, Georgia Institute of Technology, Virtual, (5 min Lightning Talk)

Sept 20, 2020 **Gluing a Morse flow line to itself III**, *Obstruction Bundle Gluing Learning Seminar*, Virtual, Organizers: Jo Nelson (Rice) and Jacob Rooney (Simons Center)

Mar 9, 2019 **Manifolds and Invariants**, *GenerationSci Conference*, Stanford, USA

May 27, 2018 **Spectral Sequences**, *Kylerec Workshop*, Leavenworth, WA, USA

May 6, 2018 **Spectral Sequences**, *Kylerec West Coast Pre-Workshop*, Stanford, USA

Student Seminar Talks at Stanford University

Sum 2020 *Thurston–Bennequin Number*

Win 2020 *Coxeter–Dynkin Diagrams*

Fall 2019 *Proof of Riemann–Roch Theorem*

Spr 2019 *Capacities for Lagrangian Cobordisms from Generating Families*

Win 2019 *Operations on Sheaves and Constructible Sheaves*

Fall 2018 *Fukaya Categories and the Simplest Example of Mirror Symmetry*

Spr 2018 *Symplectic Homology*

Win 2018 *Brieskorn Manifolds*

Fall 2017 *Cobordism Maps on Heegaard–Floer Homologies*

Spr 2017 *Introduction to Topological Field Theories*

Fall 2016 *Boundaries of δ-Hyperbolic Groups*

Conferences and workshops attended

Feb 2024 **CAST 2024**, Ruhr-Universität, Bochum

Aug 2023	**Workshop on Symplectic Field Theory 10**, Humboldt Universität, Berlin
Sept 2022	**Introductory Workshop: Floer Homotopy Theory**, MSRI, Berkeley
Sept 2022	**Connections Workshop: Floer Homotopy Theory**, MSRI, Berkeley
Aug 2022	**SYNC Early Career Workshop**, University of California Davis
Nov 2021	**Workshop on the h-principle and Beyond**, Institute for Advanced Study, Princeton
Dec 2020	**Tech Topology Conference**, Georgia Institute of Technology, Virtual
Fall 2020	**Obstruction Bundle Gluing Learning Seminar**, Virtual, Organizers: Jo Nelson (Rice) and Jacob Rooney (Simons Center)
Aug 2020	**The Eighth Pacific Rim Conference in Mathematics**, *Symplectic Geometry and Dynamical Systems*, Virtual, Organizers: Alan Hammond, Alvaro Pelayo and Fraydoun Rezakhanlou
July 2019	**WiSCon**, ICERM, Providence, Rhode Island
July 2019	**Current Trends in Symplectic Topology**, CRM, Montreal, Canada
June 2019	**Kylerec Workshop**, *Sheafy symplectic topology*, Truckee, California
Dec 2018	**Floer Homotopy 2018**, University of California Los Angeles
July 2018	**British Isles Graduate Workshop II**, *Singularities and symplectic topology*, Jersey Island, UK
May 2018	**Kylerec Workshop**, *Cotangent bundles and the nearby Lagrangian conjecture*, Leavenworth, Washington
Aug 2017	**GEAR Network Retreat**, Stanford, California
May 2017	**The MIT Talbot Workshop**, *Obstruction theory for structured ring spectra*, Gooding, Idaho

Service and Outreach

2021-22 2022-23	**Institute for Advanced Study/Princeton University Joint Symplectic Seminar**, *Co-organiser*
2021-22	**Math Conversations at Institute for Advanced Study**, *Co-organiser*
Spr, Fall 2019	**Stanford Student Symplectic Seminar**, *Organiser*, Graduate student weekly seminar on symplectic geometry and topology
2018-21	**The Noetherian Ring at Stanford**, *Organiser*, Supportive group of women and gender minorities in Stanford Department of Mathematics
2017-20	**Stanford Math Directed Reading Program**, *Mentor*, Mentored individual reading projects in advanced topics for motivated and talented undergraduates
2016-21	**Stanford Women in Math Mentoring**, *Board member and Mentor*, Mentoring program aimed at lowering the gender gap in mathematics

2013-14 **Anti Sexual Harassment Committee, Indian Statistical Institute, Bangalore**, *Student representative*