

December 9, 2020

## ***Sara B. Tukachinsky***

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**Research interests** Symplectic geometry; Differential geometry

**Appointments** 2017 – current Member of the School of Mathematics at IAS, Princeton  
Spring 2018 Member at MSRI, Berkeley  
2016 – 2017 Postdoctoral fellow of the Canada Research Chair at Université de Montréal

**Education** 2011 – 2017 PhD in Mathematics, The Hebrew University of Jerusalem  
2008 – 2011 M.Sc. in Mathematics, The Hebrew University of Jerusalem  
2005 – 2008 B.Ed. in Mathematics – extended, Michlalah Jerusalem College, *magna cum laude*

**Invited workshop talks** March 2020 Shanks Workshop: Real Enumerative Geometry and Beyond, Vanderbilt University, Nashville  
January 2020 Conference on Real and Enumerative Geometries / Topology, Geometry, and Algebra Seminar, University of Nantes  
September 2019 The Geometry and Algebra of Landau-Ginzburg Models, workshop, Fields Institute, Toronto  
March 2018 Simons Collaboration Workshop: Mirror Symmetry and Enumerative Geometry, UC Berkeley

March 2017 Shanks Workshop on Real Algebraic Geometry, Vanderbilt University, Nashville

May 2016 The Sixth Advanced Seminar in Symplectic Geometry and TFT, BICMR, Beijing

May 2016 Simons collaboration: Workshop on SYZ Mirror Symmetry and Related Topics, Harvard

**Invited colloquium talks**

November 2019 Colloquium, University of Haifa

November 2019 Colloquium, Bar Ilan University, Ramat Gan

November 2019 Colloquium, The Hebrew University of Jerusalem

November 2019 Members' Seminar, IAS, Princeton

October 2018 Colloquium, Temple University, Philadelphia

June 2018 Colloquium, Technion, Haifa

June 2018 Colloquium, Bar Ilan University, Ramat-Gan

May 2015 Tzafriri talk, The Hebrew University of Jerusalem

**Invited seminar talks**

January 2020 Topics in Symplectic Geometry, University of Augsburg

January 2020 The London Geometry and Topology Seminar

January 2020 EDGE, University of Edinburgh

January 2020 Symplectic Geometry Seminar, Heidelberg University

January 2020 Physical Mathematics Seminar, Heidelberg University

November 2019 Symplectic Geometry Seminar, ETH, Zürich

November 2019 Geometry and Topology Seminar, Technion, Haifa

November 2019 Geometry and Dynamics Seminar, Tel Aviv University

November 2019 Geometry and Topology Seminar, Weizmann Institute, Rehovot

November 2019 Math-Physics Joint Seminar, University of Pennsylvania, Philadelphia

October 2019 Symplectic and Poisson Geometry Seminar, University of Illinois at Urbana-Champaign

September 2019 Symplectic Geometry, Gauge Theory & Categorifications Seminar, Columbia University

June 2018 Geometry and Topology Seminar, Hebrew University of Jerusalem

April 2018 Geometry and Topology Seminar, UC Davis

April 2018	Open Gromov-Witten Seminar (series of 2 talks), MSRI, Berkeley
February 2017	Geometric Structures Laboratory, Fields Institute, Toronto
February 2017	Symplectic Geometry Seminar, Toronto University
February 2017	PU/IAS Symplectic Geometry Seminar
January 2017	Ottawa-Carleton Joint Algebra Seminar
October 2016	Geometry and Topology Seminar, CIRGET, Montréal
Fall 2016	Symplectic Seminar (series of 3 talks), CIRGET, Montréal
December 2015	Geometry and Dynamics Seminar, Tel-Aviv University
December 2015	Princeton/IAS Symplectic Geometry Seminar
November 2015	Symplectic Geometry Seminar, Berkeley
October 2015	KCL/UCL special geometry seminar, London
October 2015	Algebraic and Symplectic Geometry Seminar, Oxford
October 2015	Algebraic Geometry Seminar, Courant Institute, New York University
May 2015	Geometry and Topology Seminar, Hebrew University of Jerusalem

**Awards and honors**

2018	Hans Wiener thesis prize of the Hebrew University
2018	Nessyahu thesis prize of the Israel Mathematical Union
2016	Chateaubriand fellowship (declined)
2016	Lior Tzafiriri prize (includes a colloquium talk at HUJI)
2012	Joseph Klein prize
2009	Dean's excellence award
2008	Judith Lamm Young prize

**Papers**

*Open Gromov-Witten theory for cohomologically incompressible Lagrangians*, in preparation  
*Differential forms, open-closed maps, and Gromov-Witten axioms*, with Pavel Giterman and Jake P. Solomon, in preparation

*Differential forms on orbifolds with corners*, with Jake P. Solomon, [arXiv:2011.10030](https://arxiv.org/abs/2011.10030)

*Relative quantum cohomology*, with Jake P. Solomon, [arXiv:1906.04795](https://arxiv.org/abs/1906.04795)

*Point-like bounding chains in open Gromov-Witten theory*, with Jake P. Solomon, [arXiv:1608.02495](https://arxiv.org/abs/1608.02495)

*Differential forms, Fukaya  $A_\infty$  algebras, and Gromov-Witten axioms*, with Jake P. Solomon, [arXiv:1608.01304](https://arxiv.org/abs/1608.01304)

*Super-rigidity of holomorphic disks in Calabi-Yau threefolds*, with Jake P. Solomon, M.Sc. thesis ([original](#) ,or: [https://www.math.ias.edu/~sarabt/masters\\_proofread.pdf](https://www.math.ias.edu/~sarabt/masters_proofread.pdf))

**Teaching  
experience**

2011 – 2016

Teaching assistant at the Hebrew University in the following courses.

Graduate level:

Basic Notions in Differential Geometry (taught twice)

Undergraduate level:

Measure Theory

Complex Analysis and Applications

Linear Algebra I-II

Linear Algebra for Chemists

Mathematics for Physicists and Engineers (twice)

Responsibilities include preparation and teaching of recitation sessions (at graduate level: lectures) and composing homework assignments; participation in composing and grading quizzes, midterms, and finals; at graduate level also grading homework assignments.

2009 – 2011

Grader at the Hebrew University in the following courses:

Calculus I-II, Mathematics for Physicists, Calculus for Sciences, Introduction to Mathematical Logic (undergraduate level).

Responsibilities include grading homework assignments and quizzes.

2007 – 2009      In Michlalah Jerusalem College, grading various courses and giving extra recitation sessions for first-year undergraduate students

**Other**

Co-organizing the Symplectic Zoominar (Montréal-Princeton/IAS-Tel Aviv-Paris)

Gave a series of two sessions at the Berkeley Math Circle, Intermediate II group (April 2018)

Co-organized the 5-minute talks series at MSRI (spring 2018)