

# CURRICULUM VITAE

September 2013

## PERSONAL INFORMATION:

**Name:** Sergei Lanzat  
**Sex:** Male  
**Marital status:** Single  
**Date of birth:** July 24, 1978  
**Place of birth:** Kaluga, Russian Federation (former USSR)  
**Nationality:** Israeli  
**Home address:** 18/15 Danino Abraham str., Akko 24602, Israel  
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## EXPERIENCE:

**2004 - 2012** **Technion-Israel Institute of Technology.** Teaching Assistant in the department of mathematics.

### Undergraduate courses:

- Differential Geometry
- Function Theory (Complex variables)
- Metric and Topological Spaces
- Linear Algebra
- Modern Algebra

### Graduate courses:

- Smooth Manifolds
- Algebraic Topology

## POSTDOCTORAL RESEARCH:

**2013 - present** **Université de Genève, Faculté des Sciences, Section de Mathématiques, Switzerland**  
Postdoctoral position in the research group of Prof. G. Mikhalkin.

**2012 - 2013** **Max-Planck-Institut für Mathematik in Bonn, Germany**  
One year postdoctoral research position.

**UNDERGRADUATE/GRADUATE EDUCATION:**

**2007 - 2012 Technion-Israel Institute of Technology, Israel.** Ph.D. in mathematics - with distinction; date of award July 2012. Thesis title: "**Symplectic quasi-morphisms and quasi-states for non-compact symplectic manifolds.**" Thesis advisors: **Prof. M. Entov** and **Prof. M. Polyak**.

**2004 - 2007 Technion-Israel Institute of Technology, Israel.** M.Sci. in mathematics - Summa Cum Laude; date of award March 2007. Thesis title: "**Configuration Spaces and Real Enumerative Geometry.**" Thesis advisor: **Prof. M. Polyak**.

**2001 - 2004 Technion-Israel Institute of Technology, Israel.** B.A. in mathematics - Cum Laude; date of award May 2004.

**PRIZES:**

**February 2005** Excellence scholarship Faculty Funding.

**June 2013** Technion Mathematical Department Encouragement Fund Prize for Excellence in Mathematics.

**RESEARCH INTERESTS:****Symplectic geometry and topology:**

- Convex symplectic manifolds
- Gromov-Witten invariants
- Quantum homology
- Floer homology
- Symplectic quasi-morphisms and quasi-states
- Moduli spaces of pseudo-holomorphic curves

**Algebraic geometry and topology:**

- Real enumerative geometry
- Real Gromov-Witten invariants
- Intersection theory
- Configuration spaces
- Tropical geometry

**ORGANIZATION OF SEMINARS:**

- Organization and conduct of a seminar on the Obstruction Theory and Characteristic Classes in the department of mathematics of the Technion, October 2007 - July 2008

- Organization and conduct of a seminar on the Complex Algebraic Geometry in the department of mathematics of the Technion, October 2008 - July 2009

## **PARTICIPATION IN SEMINARS AND WORKSHOPS:**

### **Seminars:**

- Constant participation in the topological research seminar in the department of mathematics of the Technion, Israel
- Series of talks on analytic foundations of Heegaard-Floer homology at the topological research seminar in the department of mathematics of the Technion, Israel, 2004
- Series of talks on symplectically fillable contact 3-manifolds at the topological research seminar in the department of mathematics of the Technion, Israel, 2006
- Series of talks on complex-analytic theory of Teichmüller spaces at the topological research seminar in the department of mathematics of the Technion, Israel, 2007
- A talk on the Master Thesis at the topological research seminar in the department of mathematics of the University of Haifa, Israel, January 2007
- A talk on the Master Thesis at the research seminar in the International Max Planck Research School for Moduli Spaces and their Applications in Algebra, Differential Geometry and Mathematical Physics at the University of Bonn and The Max-Planck-Institut für Mathematik, August 2007
- Organization and conduct of a seminar on the Obstruction Theory and Characteristic Classes in the department of mathematics of the Technion, October 2007 - July 2008
- Organization and conduct of a seminar on the Complex Algebraic Geometry in the department of mathematics of the Technion, October 2008 - July 2009

### **Workshops:**

- Participation in the workshop of Quantum Moduli Spaces and TQFT (Topological Quantum Field Theory), 14 to 18 August 2006, in CTQM, University of Aarhus
- Participation in the Workshop on Floer Theory and Symplectic Dynamics, May 19-24, 2008, in CRM - The Centre de Recherches Mathématiques, Université de Montréal
- Participation in the Summer School in Symplectic and Real Algebraic Geometry, June 30-July 11, 2008, in Institut Henri Poincaré, Paris
- Participation in the Summer School and in the Workshop in Symplectic and Contact Geometry and Topology, August 3-21, 2009, in Mathematical Sciences Research Institute, Berkeley
- Participation in the Workshop on Symplectic Geometry, Contact Geometry and Interactions 4th edition, January 28-30, 2010, in Institut Henri Poincaré, Paris

- Participation in the Workshop on Symplectic Geometry and Transformation Groups, July 5-9, 2010, in ICMS, Edinburgh
- Participation in the Workshop on Real Enumerative Questions in Complex and Tropical Geometry , April 17-23, 2011, in Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach
- Participation in the "Semester on 4-manifolds and their combinatorial invariants", January - June, 2013, in Max-Planck-Institut für Mathematik, Bonn
- Participation in the Special Program "Tropical Geometry and Topology" , July - September, 2013, in Max-Planck-Institut für Mathematik, Bonn

**Conferences:**

- "Quasi-morphisms and quasi-states for non-closed symplectic manifolds", on The 2011 Meeting of the Israel Mathematical Union, June 16, 2011, Bar-Ilan University, Ramat Gan.

**LIST OF PUBLICATIONS:**

1. S. Lanzat, M. Polyak, *Counting real curves with passage/tangency conditions*, J. London Math. Soc. (2012) 85 (3): 838-854, doi: 10.1112/jlms/jdr070.
2. S. Lanzat, *Quasi-morphisms and symplectic quasi-states for convex symplectic manifolds*, Int. Math. Res. Notices (2013) 23, 5321-5365, doi: 10.1093/imrn/rns205.
3. S. Lanzat, M. Polyak, *Integrating curvature: from Umlaufsatz to  $J^+$  invariant*, Topology and its Applications (2013) 160 (7): 871-874, doi: 10.1016/j.topol.2013.01.016.
4. S. Lanzat, *Quantum homology of compact convex symplectic manifolds*, preprint arXiv: 1302.1021, submitted for publication.
5. S. Lanzat, *Hamiltonian Floer homology for compact convex symplectic manifolds*, preprint arXiv: 1302.1025, submitted for publication.
6. S. Lanzat, *Counting isotropic tangent lines of hypersurfaces*, preprint arXiv: 1309.0994, submitted for publication.

**CONFERENCE PROCEEDINGS:**

1. S. Lanzat, M. Polyak, *Enumerating real rational curves with tangency conditions*, Oberwolfach reports, **8** 2011/20 (2011) doi:10.4171/OWR/2011/20.

**LANGUAGES:**

**Russian** – native.

**English** – fluent.

**Hebrew** – fluent.