

**Paul Ian BIRAN, Ph.D.**

Department of Pure Mathematics  
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## CURRICULUM VITAE

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E-mail: biranp@post.tau.ac.il  
Date and place of birth: 25.2.1969 Bucharest, Romania  
Date of arrival in Israel: 13.1.1971  
ZAHAL (Israeli) Military Service: 1987-1992  
Marital status: Married; 1 child

## EDUCATION

1994–1997 Ph.D. Mathematics (with distinction), Tel Aviv University.  
Date of award: 1997  
Title of Doctoral Dissertation: Geometry of Symplectic  
Packing  
Name of Supervisor: Professor L. Polterovich  
1992–1994 B.Sc. Mathematics (summa cum laude), Tel Aviv University.  
Date of award: 1994

## ACADEMIC AND PROFESSIONAL EXPERIENCE

July 2008– Full Professor, School of Mathematical Sciences, Tel-  
Aviv University.  
June 2005–June 2008 Associate Professor, School of Mathematical Sciences,  
Tel-Aviv University.

- Sep 2001–May 2005 Senior Lecturer, School of Mathematical Sciences, Tel-Aviv University.
- Oct 1999–2001 Lecturer, School of Mathematical Sciences, Tel-Aviv University.
- Sep 1997–1999 Szegő Assistant Professor, Department of Mathematics, Stanford University.
- 1994–1997 Teaching Assistant, Tel Aviv University
- 1992–1994 Computer programmer at CFX Ltd.

**Other appointments**

- March 2008–Aug 2008 Invited Professor at Universite de Montreal, Canada.
- Sept 2007–Feb 2008 Invited Professor for Nachdiplom Lectures at ETH Zurich, Switzerland.
- June 2006 Research Fellow of the Japan Society for the Promotion of Science.
- June 2005 Invited Professor at Ecole Normale Superieure Lyon.

**Participation in Editorial Boards**

- Jan 2006– Member of the editorial board of *Compositio Mathematica*.
- Feb 2004– Associate Editor in *Journal of Symplectic Geometry*.

**ACTIVE PARTICIPATION IN SCIENTIFIC MEETINGS****Main Invited Addresses**

- Aug 2002 Invited speaker at the International Congress of Mathematicians, Beijing.  
Lecture on *Geometry of Symplectic Intersections*.
- June 2004 Prize Lecture at the Fourth European Congress of Mathematics, Stockholm.  
Lecture on *Symplectic Topology and Algebraic Families*.

- May 2006 Erdős Prize Lecture at the 2006 Annual Conference of the Israel Mathematical Union.  
Lecture on *Symplectic Points of View on Some Questions in Algebraic Geometry*.
- June 2007 Invited speaker at the Yashafest Conference "New Perspectives and Challenges in Symplectic Field Theory", in honour of the 60'th birthday of Yasha Eliashberg, Stanford University, USA.  
Lecture on *Quantum Structures for Lagrangian Submanifolds*.
- May 2005 Topology Festival (Cornell University).  
Lecture on *Algebraic Families and Lagrangian Cycles*.
- Sep 2004 Plenary Lecture at the "DMV Annual Meeting 2004", Heidelberg.  
Lecture on *Symplectic Geometry and Algebraic Singularities*.
- Aug 2002 Plenary talk at Satellite Conference on Differential Geometry, Nankai Institute Tianjin (China).  
Lecture on *Symplectic Viewpoints in Algebraic Geometry*.
- June 2001 Plenary Lecture at the 2001 Annual Meeting of the Israel Mathematical Union at the Dead Sea.  
Lecture on *Symplectic Methods in Algebraic Geometry*.
- July 2000 Third European Congress of Mathematics, Barcelona, Spain. Talk given in mini-symposium on Symplectic and Contact Geometry and Hamiltonian Dynamics.  
Lecture on *Symplectic Embeddings, Algebraic Geometry and Lagrangian Submanifolds*.
- April 1999 Geometry Festival (University of Pennsylvania).  
Lecture on *Lagrange Skeletons and Symplectic Rigidity*.

**Colloquia**

- Oct 2007 Zurich Colloquium in Mathematics.  
Lecture on *From Morse to Floer and Beyond*.

- Oct 2006 Colloquium at Columbia University, New-York.  
Lecture on *Symplectic Points of View on Some Questions in Classical Algebraic Geometry*.
- April 2006 Colloquium at University of Michigan at Ann-Arbor.  
Lecture on *Algebraic Families and Lagrangian Cycles*.
- Nov 2004 Colloquium at Hebrew University.  
Lecture on *Algebraic Varieties and Lagrangian Cycles*.
- May 2004 Colloquium at Bar-Ilan University.  
Lecture on *Lagrangian Embeddings and Algebraic Singularities*.
- Nov 2002 Colloquium at Bar-Ilan University.  
Lecture on *Symplectic Viewpoints in Algebraic Geometry*.
- Feb 2002 Colloquium at University of Munich in honor of Karl Stein.  
Lecture on *Global Symplectic Geometry via Stein Manifolds*.
- Oct 1999 Colloquium at Tel-Aviv University,  
Lecture on *From Algebraic Geometry to Symplectic Topology and Back*.

**Other talks**

- June 2008 Canada-France Congress in Mathematics, Montreal.  
Lecture on *A Floer-Gysin long exact sequence for Lagrangian submanifolds*.
- May 2008 Floer Theory and Symplectic Dynamics, Centre de Recherches Mathematiques, Universite de Montreal, Canada.  
Lecture on *Relative Enumerative Geometry on Lagrangian Tori*.
- Feb 2008 Workshop on Symplectic Geometry, Contact Geometry and Interactions, Brussels Belgium.  
Lecture on *From uniruled symplectic manifolds to uniruled Lagrangians*.

- Oct 2006 Two Seminar Lectures at Columbia University, New-York.  
Lecture 1: *Floer Theory: Lagrangian intersections, Non-Intersections and Beyond.*  
Lecture 2: *Open Books, Fillings and the Symplectic Mapping Class Group.*
- Oct 2006 Two lectures at Courant Symplectic Geometry Seminar, NYU.  
Title: *Quantum Cohomology and Relative Symplectic Invariants I + II.*
- Aug 2006 Getafe VII Workshop on Symplectic and Contact Topology, Madrid.  
Lecture on *The symplectic mapping class group and fillings.*
- June 2006 Two Lectures at Symposium on Symplectic Geometry and Topology, Tokyo University.  
Lecture 1: *Lagrangian Cycles and Ample Divisors.*  
Lecture 2: *Symplectic Automorphisms and Stein Fillings.*
- June 2006 Invited lecture series of 4 lectures at Tokyo Metropolitan University, Tokyo Japan. Title: *Floer Theory and its Applications.*
- June 2006 International Conference on Toric Topology, Osaka Japan.  
Lecture on *Circle Actions on Algebraic Varieties and Projective Duality.*
- April 2006 Spring lectures in algebraic geometry.  
Invited lecture series of 5 lectures at University of Michigan at Ann-Arbor.  
Title: *Linear Systems, Singularities and Lagrangian Cycles.*
- Dec 2005 Recent Advances in Symplectic Geometry, Banff (Canada).  
Lecture on *Projective Duality and Symplectic Topology.*
- June 2005 Colloque De La Topologie a la Geometrie Symplectique (conference in honor of Francois Laudenbach), Nantes.  
Lecture on *Algebraic Embeddings from the Symplectic Viewpoint.*

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- Nov 2004      Prospects in Geometry 2004, Max Planck Institute ,  
Leipzig.  
Lecture on *Projective Embeddings and Lagrangian Cy-  
cles*.
- Sep 2004      Geometry Seminar, Tokyo Metropolitan University, Japan.  
Lecture on *Symplectic Geometry of Algebraic Singu-  
larities*.
- Sep 2004      Symplectic Geometry Seminar, Hokkaido University, Japan.  
Lecture on *Lagrangian Embeddings and Algebraic Singu-  
larities*.
- June 2004      Nato Advanced Study Institute conference on “Morse  
theoretic methods in non-linear analysis and symplectic  
topology”, University of Montreal.  
Course on *Lagrangian Geometry and Topology*.
- May 2004      Israeli Mathematical Union meeting, Shfayim.  
Lecture on *Lagrangian Embeddings and Algebraic Sin-  
gularities*.
- Feb 2004      Geometry Seminar ENS Lyon.  
Lecture on *Linear Systems, Algebraic Families and La-  
grangian Submanifolds*.
- Jan 2004      Workshop on “Groups, Geometry and Dynamics”, in  
memory of Robert Brooks, Technion Israel.  
Lecture on *Linear Systems, Algebraic Families and La-  
grangian Submanifolds*.
- Aug 2003      Workshop on “holomorphic curves in contact geometry”,  
at American Institute of Mathematics (California) USA.  
Lecture on *Computations in Floer Theory with Applica-  
tions to Geometry and Topology*.
- Feb 2003      Geometry Seminar, ETH Zurich.  
Lecture on *Symplectic Obstructions in Algebraic Geom-  
etry*.
- Jun 2002      Conference on Symplectic Topology and Complex Ge-  
ometry. University of Lille (France).  
Lecture on *Symplectic Obstructions in Algebraic Geom-  
etry*.

- Aug 2001      Workshop on Symplectic and Contact Topology. Lorentz Centre, Leiden, Holland.  
Lecture on *Propagation in Hamiltonian Dynamics and Relative Symplectic Topology*.
- Apr 2001      Conference on Symplectic and Contact Topology, Quantum Cohomology, Symplectic Field Theory and Higher-Dimensional Gauge Theory. Montreal, Canada.  
Lecture on *Floer Homology and Algebraic Degenerations*.
- Feb 2001      Seminars on Symplectic Geometry and Topology at the Ecole Polytechnique (Paris) and at the University of Strasbourg.  
Lecture on *Lagrangian non-Intersections and Degenerations of Algebraic Varieties*.
- Nov 2000      Symplectic Geometry and Hamiltonian Dynamics. Workshop in honour of Edi Zehnder on the occasion of his 60'th birthday. ETH, Zurich.  
Lecture on *Lagrangian non-Intersections*.
- Sep 2000      Workshop on "Perspectives in Topology of Real Algebraic Varieties", Oberwolfach.  
Lecture on *Topological Restrictions on Lagrangian Embeddings Into Closed Manifolds*.
- Jun 2000      Workshop on Symplectic 4-manifolds, Ecole Polytechnique, Paris.  
Lecture on *Subcritical manifolds and Lagrange embeddings*.
- May 2000      Annual Meeting of the Israel Mathematical Union, Haifa University, Israel.  
Lecture on *Symplectic Topology on Subcritical Manifolds*.
- Dec 1999      Millennium Eve's Workshop on Symplectic Geometry and Topology, ETH, Zurich.  
Lecture on *Symplectic Topology on Subcritical Manifolds*.
- Jul 1999      Workshop on Symplectic Geometry and Topology, Research Institute of Math. Sciences, Kyoto, Japan.

- Lecture on *Geometry of Subcritical Symplectic Manifolds*.
- Jun 1999 Conference on Symplectic Geometry, Instituto Superior Tecnico Lisbon, Portugal. Lecture on *Decompositions of Symplectic Manifolds. Examples and Applications*.  
Lecture on *Lagrange Skeletons and Symplectic Rigidity*.
- Dec 1998 Two lectures in the joint seminar to Ecole Polytechnique and Universite de Paris-Sud Orsay,  
Lecture 1: *Lagrangian Barriers and Symplectic Embeddings*  
Lecture 2: *Decompositions of symplectic manifolds and symplectic packings*.
- Dec 1998 Seminar on Symplectic Geometry, ETH Zurich,  
Lecture on *Decompositions of symplectic manifolds and symplectic packings*.
- Dec 1998 Seminar on Analysis, ETH Zurich,  
Lecture on *Lagrangian Barriers and Symplectic Embeddings*.
- Jul 1998 Two lectures at the Warwick Symposium on Symplectic Geometry (concluding workshop), Warwick University.  
Lecture 1: *A New Approach to Problems of Symplectic Embeddings*.  
Lecture 2: *Construction of New Kähler Classes on Algebraic Varieties*.
- Apr 1998 Seminar on Topology, University of Quebec at Montreal.  
Lecture on *How to Solve Embedding Problems in Symplectic Manifolds*.
- Apr 1998 Seminar on Symplectic Topology, University of Wisconsin (Madison). Lecture on *A New Approach to Embedding Problems in Symplectic Manifolds*.
- Dec 1997 Seminar on Algebraic Geometry, University of Utah (Salt Lake City). Lecture on *Seshadri Constants in Symplectic Geometry*.
- Nov 1997 Series of three lectures at Michigan University, Ann Arbor. Three lectures on *Geometry of Symplectic Embeddings. Rigidity versus Stability*.

- Oct 1997           AMS meeting, Symplectic Geometry Section, (Milwaukee Wisconsin). Lecture on *Stability of Symplectic Packing*.
- Jun 1997           Workshop on Symplectic Geometry (part of the program on Singularity Theory and Geometry), Fields Institute. Lecture on *Symplectic Aspects of Ampleness*.
- May 1997           Israeli Mathematical Union meeting, Bar-Ilan University. Lecture on *Geometry of Symplectic Packing*.
- Dec 1996           Bay Area Joint Seminar on Symplectic Geometry and Topology, Stanford University. Lecture on *Symplectic Packing in Dimension Four*.
- Dec 1996           Seminar on Gauge Theory and Topology, Harvard University. Lecture on *Symplectic Packing in Dimension Four*.

**ORGANIZATION OF CONFERENCES AND WORKSHOPS**

- June 2004            Scientific co-director of Summer School on “Morse Theoretic Methods in non-Linear Analysis and Symplectic Topology”, NATO Advanced Study Institute, University of Montreal. (Co-organized with Octav Cornea and Francois Lalonde).
- Spring 2002        Research Program on “Symplectic Topology, Algebraic Geometry and Calculus of Variations”, Tel-Aviv University. (Co-organized with Leonid Polterovich).
- May 2002           Israel Mathematical Union Workshop on Geometry and Topology, Tel-Aviv University. (Co-organized with Leonid Polterovich).
- May 2001           Israel Mathematical Union Workshop on Geometry and Topology, Tel-Aviv University.

**GRADUATE STUDENTS**

Lev Buhovsky (MSc)	Graduated, Nov. 2004. Currently PhD Student.
Yochay Jerby (MSc)	Graduated, March 2005. Currently PhD Student.
Michael Khanevsky	PhD Student.

**GRANTS AND AWARDS**

2006	ISF grant 1227/06 (Principal Investigator), for 4 years.
2006	Fellowship of the Japan Society for the Promotion of Science (JSPS).
2006	Erdős Prize.
2004	European Mathematical Society Prize.
2004	Oberwolfach Prize in Geometry and Topology.
2004	Rector's Teaching Award (best lecturer in faculty of exact sciences).
2002	ISF grant 205/02-1 (Principal Investigator), for 3 years.
2000	BSF grant 1999086 (Principal Investigator), for 3 years.
1999	Alon Fellowship
1998	Landau Research Award (Mife'al Hapaiss)
1998	NSF grant number DMS-9803192
1996	Israel Rosset's award for distinction in PhD studies
1995	Dean's certificate of distinction
1994	Rector's certificate of distinction
1994	Dean's certificate of distinction
1993	Dean's certificate of distinction

Date: March 2009