

CURRICULUM VITAE  
CIPRIAN MANOLESCU

Department of Mathematics  
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**Personal:**

Born December 24, 1978 in Alexandria, Romania

**Education:**

Ph.D. Harvard University, June 2004  
Advisor: Peter B. Kronheimer  
Thesis: *A spectrum valued TQFT from the Seiberg-Witten equations*  
B.A. Harvard University, June 2001, Summa cum laude in Mathematics  
Senior thesis: *Finite dimensional approximation in Seiberg-Witten theory*

**Research Interests:**

Gauge theory, symplectic geometry, algebraic topology, low-dimensional topology

**Professional History:**

Assistant Professor, Columbia University, 2005-Present  
Research Fellow, Clay Mathematics Institute, 2004-2008  
Veblen Research Instructor, joint position at Princeton University and the Institute for Advanced Study, 2004-2005

**Academic Honors:**

Clay Research Fellowship, 2004-2008  
Miller Fellowship at UC Berkeley, 2004 (declined)  
Putnam Fellowship at Harvard University, 2002-2004  
The Frank and Brennie Morgan Prize for Outstanding Research in Mathematics  
by an Undergraduate Student, awarded jointly by AMS-MAA-SIAM, 2001  
The Mumford Prize for the most promising undergraduate in the Mathematics Department  
at Harvard, June 2001  
The Hoopes Prize for outstanding senior thesis at Harvard, June 2001  
Elected in Phi Beta Kappa as a junior at Harvard, spring 2000  
Harvard College Research Program grant (advisor: Peter Kronheimer) - summer 1999 and 2000  
John Harvard Scholar (1998-2001)  
First place on the Putnam Mathematical Contest for college students: 1997, 1998, and 2000  
Detur Book Prize for top academic achievement during the freshman year at Harvard, 1998  
Three Gold Medals with maximal score (42 points) at the International Mathematical Olympiad:  
Toronto, Canada (1995); Bombay, India (1996); Mar del Plata, Argentina (1997)  
Two Gold Medals with maximal score at the Balkan Mathematical Olympiad:  
Bacau, Romania (1996); Kalambaka, Greece (1997)

**Articles:**

- A concordance invariant from the Floer homology of double branched covers* (with B. Owens),  
preprint, math.GT/0508065
- Nilpotent slices, Hilbert schemes, and the Jones polynomial*, math.SG/0411015, to appear in  
the Duke Mathematical Journal
- A gluing theorem for the relative Bauer-Furuta invariants*, math.GT/0311342, submitted
- Periodic Floer pro-spectra from the Seiberg-Witten equations* (with P.B. Kronheimer),  
preprint, math.GT/0203243
- Seiberg-Witten-Floer stable homotopy type of 3-manifolds with  $b_1 = 0$* , Geometry and Topology,  
Vol. 7 (2003), 889-932
- An application of Brieskorn's theorem* (Romanian), Gazeta Matematica B **4-5** (1995), p. 145

**Conference Talks (Principal speaker):**

- Differentialgeometrie im Großen, workshop in Oberwolfach, Germany, August 2005
- SYMAT'05 Workshop on symplectic topology in Lisbon, Portugal, July 2005
- IAS Holomorphic Curves Workshop, Princeton, May-June 2005
- Georgia Topology Conference, University of Georgia at Athens, August 2004
- Conference on 3-dimensional topology at Ohio State University, December 2003
- MSRI Workshop on Floer homology for 3-manifolds in Banff, Canada, November 2003
- Conference on invariants in low-dimensional topology at the Renyi Institute, Budapest, June 2003
- MAA MathFest in Burlington, Vermont, August 2002
- JAMI Workshop on low-dimensional topology at Johns Hopkins University, March 2002

My work was also mentioned in:

- Finite dimensional approximations in geometry*, talk by Mikio Furuta at the International Congress  
of Mathematicians, Beijing, August 2002
- Floer homotopy type of rational homology 3-spheres, after Manolescu*, talk by Peter Kronheimer  
at the Conference on 4-dimensional manifolds, Oberwolfach, July 2001

**Seminar Talks:**

- Georgia Institute of Technology, topology seminar, March 2005
- Harvard University, gauge theory and topology seminar, February 2005
- UC Berkeley, topology seminar, January 2005
- Stanford University, topology seminar, January 2005
- Stanford University, symplectic geometry seminar, January 2005
- Columbia University, gauge theory seminar, December 2004
- Princeton University, topology seminar, December 2004
- California Institute of Technology Colloquium, November 2004
- California Institute of Technology, geometry seminar, November 2004
- University of Notre Dame, Felix Klein seminar, April 2004
- McMaster University, geometry and topology seminar, December 2003
- Michigan State University, symplectic geometry seminar, October 2003
- LMU Munich, Germany, geometry seminar, June 2003
- Universidade do Porto, Portugal, geometry and topology seminar, January 2003
- Université du Québec à Montréal, geometry and topology seminar, September 2001
- University of Notre Dame, geometry and topology seminar, May 2001
- Harvard University, gauge theory and topology seminar, April 2001

**Teaching Experience:**

Instructor for Tutorial on Morse Theory, Fall 2003

Instructor for Tutorial on Symplectic and Contact Geometry, Summer 2003

Instructor for Math 21a - Multivariable Calculus, Spring 2003

Instructor for Tutorial on Knots and Three-Manifolds, Summer 2002

Course Assistant for various classes, 1998-2004; four times awarded the Certificate of Distinction in Teaching by the Derek Bok Center, based on student evaluations for course assistants:  
Fall 1998, Spring 1999, Spring 2001, Spring 2002

(All courses were taught at Harvard.)

**Services:**

Referee for several academic journals

Reviewer for *Mathematical Reviews*

**References:**

Peter B. Kronheimer, Harvard: kronheim@math.harvard.edu

Tomasz S. Mrowka, MIT: mrowka@math.mit.edu

Clifford H. Taubes, Harvard: chtaubes@math.harvard.edu

Michael J. Hopkins, MIT: mjh@math.mit.edu

Oliver Knill, Harvard (teaching): knill@math.harvard.edu