

TOM COATES  
CURRICULUM VITAE

**Address**

Department of Mathematics  
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Born: 12th November 1976

U.K. Citizen

**Education/Employment**

Aug 2003–Present Harvard University:  
Benjamin Peirce Assistant Professorship  
Jun–Aug 2003 Imperial College, London  
visit funded by the Clay Mathematics Institute Liftoff program  
1998–2003 University of California at Berkeley:  
Ph.D. in Mathematics, May 2003  
Thesis title: Riemann–Roch theorems in Gromov–Witten theory  
Thesis advisor: Alexander Givental  
1997–1998 Jesus College, Cambridge, UK:  
Certificate of Advanced Study in Mathematics (“Part III”) with Distinction  
1994–1997 Jesus College, Cambridge, UK:  
BA in Mathematics with First Class Honours

**Fellowships and awards (selected)**

NSF grant 0401275, “Gromov–Witten Theory”, July 2004–June 2007  
Herb Alexander Prize, Spring 2003  
Departmental Research Fellowship, Spring 2001  
UC Berkeley Award for Outstanding Graduate Student Instructor, Fall 2000  
Keller Prize, May 1997  
Bronowski Prize for Mathematics, May 1995

**Teaching Experience (selected)**

Jan 2004 Instructor for Linear Algebra at Harvard University  
Aug 2003 Instructor for Multivariable Calculus at Harvard University  
Aug 2002 Graduate Student Instructor for Linear Algebra at UC Berkeley  
Jun 2002 Summer Session Instructor for Linear Algebra at UC Berkeley  
Jan 2002 Graduate Student Instructor for Analytical Geometry and Calculus at UC Berkeley  
Jun 2001 Summer Session Instructor for Multivariable Calculus at UC Berkeley  
Aug 2000 Graduate Student Instructor for Multivariable Calculus at UC Berkeley  
Aug 1999 Videotaper for the Mathematics Department Teaching Workshop at UC Berkeley  
Duties included observing new teaching assistants and helping them to analyse and improve their teaching  
Aug 1998 Graduate Student Instructor for Multivariable Calculus at UC Berkeley  
Jan 1998 Supervisor for Part IB Further Analysis at Jesus College  
Oct 1997 Supervisor for Part IB Analysis at Jesus College

**Publications**

“Riemann–Roch Theorems in Gromov–Witten Theory”, Ph.D. thesis, UC Berkeley, May 2003.  
“Quantum Riemann–Roch, Lefschetz and Serre” with Alexander Givental, to appear in *Annals of Mathematics*.  
Available on-line at <http://front.math.ucdavis.edu/math.AG/0110142/>

**Invited talks (selected)**

- May 2004 Geometry and Topology of String Theory conference, Northwestern University:  
"Quantum Extraordinary Cohomology"
- Apr 2004 Harvard Basic Notions seminar:  
"Gromov–Witten Invariants"
- Oct 2003 Courant/SUNY Stony Brook Symplectic Geometry seminar:  
"A Quantum Lefschetz Hyperplane Theorem"
- Oct 2003 SUNY Stony Brook colloquium:  
"Holomorphic Curves and Symplectic Geometry"
- Oct 2003 Harvard Math Table:  
"Three-Manifolds and Surgery"
- Oct 2003 MIT Differential Geometry seminar:  
"Symplectic Linear Algebra and Gromov–Witten Theory"
- Sep 2003 Columbia Algebraic Geometry seminar:  
"Quantization and Gromov–Witten Theory"
- Sep 2003 Harvard/MIT Algebraic Geometry seminar:  
"Quantization and Gromov–Witten Theory"
- Apr 2003 UC Berkeley, Symplectic Geometry seminar:  
"Quantization and Mirror Symmetry"
- Oct 2002 UC Berkeley, Joint Mathematics–Physics seminar:  
"Twisted Gromov–Witten invariants"
- Jan 2002 UC Berkeley, Graduate Student Seminar:  
"Gromov's Non-Squeezing Theorem"
- Nov 2001 Oxford, special seminar:  
"A new proof of the mirror theorem"
- Nov 2001 Cambridge, Geometry seminar:  
"A new proof of the mirror theorem"
- Nov 2001 Institute for Pure and Applied Mathematics, Conference on Representations of Loop Groups:  
"Loop groups, quantization and mirror symmetry"
- Nov 2001 UC Davis, Geometry/Topology seminar:  
"A new proof of the mirror theorem"
- Sep 2001 UC Berkeley, Graduate Student Seminar:  
"Three-Manifolds Under The Knife"
- Jun 2001 UC Berkeley, Student String Theory Seminar  
"Quantum Cohomology,  $S^1$ -Equivariant Floer Theory and  $\mathcal{D}$ -modules"