

Jim Fowler

Curriculum Vitae

The Ohio State University ▪ Department of Mathematics
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Education

University of Chicago 2003–2009
Chicago, Illinois

M.S. in Mathematics, June 2005.

Ph.D. in Mathematics, June 2009.

Harvard University 1999–2003
Cambridge, Massachusetts

A.B. in Mathematics, *summa cum laude*, June 2003.

Junior Phi Beta Kappa.

Teaching

The Ohio State University, Zassenhaus Assistant Professor 2009–present

Mathematics 151: Calculus and Analytic Geometry I.

Mathematics 153: Calculus and Analytic Geometry III.

Mathematics 254 and 254.02: Calculus and Analytic Geometry IV.

Mathematics 660: Introductory Complex Analysis.

Mathematics 953: Topics in Topology

Mathematics 345: Foundations of Higher Mathematics

Mathematics 758: Algebraic Topology: Cohomology

Mathematics 765: Smooth Manifolds

The Ohio State University, Ross Mathematics Program Summer 2011

Summer 2010

Held a number theory recitation for high school students; taught a piecewise-linear topology course for undergraduate and high school students.

University of Chicago, Directed Reading Program, Mentor 2004–2009

Mentored undergraduate projects on automatic groups, geometric group theory, combinatorial game theory, piecewise-linear topology, knot theory, stochastic processes.

University of Chicago, Polk Brothers Program 2005–2009

Taught middle school students in small groups and whole-classroom settings; assisted Chicago public school teachers with pedagogy and their study of mathematics.

University of Chicago, Graduate Student Lecturer 2005–2006

2008–2009

Mathematics 131–133: Elementary Functions and Calculus.

Mathematics 153: Calculus.

Mathematics 204–205: Inquiry-based learning (Moore method); analysis in \mathbb{R}^n .

University of Chicago, College Fellow Mathematics 203–205: Analysis in \mathbb{R}^n .	2004–2005
University of Chicago, Research Experience for Undergraduates, Mentor	Summer 2004 Summer 2006 Summer 2007
University of Chicago, Undergraduate Lie Theory Seminar	Fall 2006
Canada/USA Mathcamp, Mentor	Summer 2004 Summer 2005
Taught and mentored high school students in topics including piecewise-linear topology, quaternions, knots and links, game theory, projective geometry, p -adic numbers.	
University of Chicago, Warm Up Program, Lecturer	September 2005
Lectured in a mini-course reviewing point-set topology for incoming graduate students.	
Harvard University, Course Assistant	2000–2003
Graded homework and ran weekly recitation sessions for multivariable calculus and linear algebra, representation theory, algebraic topology.	

Awards and Fellowships

NSF Graduate Research Fellowship	2003–2008
McCormick Fellowship, University of Chicago	2003–2005
Palfrey Exhibition, Harvard University	May 2003
Awarded to the most distinguished scholar in the senior class holding a stipendiary scholarship.	
Wister Prize, Harvard University	May 2003
Awarded to the student with the highest record in mathematics.	
Robert Fletcher Rogers Prize, Harvard University	May 2003
Awarded to the two students who gave the best talks at the undergraduate mathematics table.	
Certificate of Distinction in Teaching Derek Bok Center for Teaching and Learning	Fall 2000

Invited talks

Projective Planes OSU Radical Pi	April 20, 2011
CAT(0) square complexes OSU Math Circle	April 17, 2011

\mathcal{B} -bounded finiteness University of Michigan	March 31, 2011
Rational Poincaré duality and controlled symmetric signature Notre Dame	March 4, 2010
Dividing a square into triangles of equal-area OSU Radical Pi	January 13, 2010

Conference talks

Poincaré duality groups Stratified Spaces: Joining Analysis, Topology and Geometry Mathematisches Forschungsinstitut Oberwolfach	December 11–17, 2011
Weighted algebraic topology Geometrical methods in high-dimensional topology The Ohio State University	May 16–21, 2011
\mathcal{B} -bounded finiteness Spring Topology and Dynamics Conference The University of Texas at Tyler	March 17–19, 2011
Rational Poincaré duality groups and controlled symmetric signature Workshop in Geometric Topology Colorado College	June 10–12, 2010
Rational Poincaré duality groups and controlled symmetric signature Spring Topology and Dynamics Conference Mississippi State University	March 18–20, 2010
Rational Poincaré duality groups Ferryfest University of Chicago	March 22–24, 2009
Lattices with torsion and rational homology manifolds Topology of Stratified Spaces Mathematical Sciences Research Institute	September 8–12, 2008

Other conferences attended

Singularities in Geometry and Topology Courant Institute of Mathematical Sciences	March 17–20, 2008
AMS Special Session on Geometric Topology Courant Institute of Mathematical Sciences	March 15–16, 2008
Topological and Geometric Rigidity Banff International Research Station	July 29–August 3, 2007
Problems in Geometric Group Theory American Institute of Mathematics	April 23–27, 2007

Nil Phenomena in Topology Vanderbilt University	April 14–15, 2007
Introductory Workshop on Computational Application of Algebraic Topology Mathematical Sciences Research Institute	September 5–8, 2006
Conference on Geometric Group Theory Centre de recherches mathématiques	July 3–14, 2006
Workshop on Group Actions and Rigidity University of Hawaii, Manoa	March 20–22, 2006
Ricci Flow, 3-manifolds, and Geometry Clay Mathematics Institute	June 20–July 15, 2005
Submanifolds, Singular Varieties and Stratified Spaces Courant Institute of Mathematical Sciences	March 13–16, 2005
Braids, Links, and Mapping Class Groups Columbia University	March 15–20, 2005
Conference on Low-dimensional topology University of Virginia	December 15–19, 2004

Seminar talks

\mathcal{B} -bounded finiteness OSU Topology Seminar	February 15, 2011
A first talk on surgery OSU Topology Seminar	October 5, 2010
Rational Poincaré duality and controlled symmetric signature OSU Topology Seminar	March 2, 2010
Rational Poincaré duality groups OSU Topology Seminar	November 24, 2009
Double suspensions of homology spheres Farb and Friends Student Seminar	May 20, 2008
The α -approximation theorem Farb and Friends Student Seminar	November 4, 2008
Quaternionic toric varieties Farb and Friends Student Seminar	April 4, 2008
Hyperbolization of polyhedra Farb and Friends Student Seminar	March 7, 2008
Classifying high-dimensional manifolds Farb and Friends Student Seminar	October 12, 2007

Wall's finiteness obstruction Algebraic Topology Proseminar	September 27, 2007
Introduction to Surgery Algebraic Topology Proseminar	May 29, 2007
PL-unknotted of codimension ≥ 3 knots Farb and Friends Student Seminar	May 11, 2007
Building Aspherical Manifolds via Davis' Construction Farb and Friends Student Seminar	January 25, 2007
Approximating L^2 invariants by finite-dimensional analogues L^2 Seminar	November 22, 2006
Algebraic topology and distributed computing Applied algebraic topology seminar	November 2, 2006
The h -cobordism theorem Shmuel's Student Seminar	March 7, 2005
Wall's finiteness obstruction Algebraic Topology Proseminar	November 23, 2004
2-adics and equidissections of squares Pizza Seminar	November 16, 2004
Introduction to characteristic classes Algebraic Topology Proseminar	October 19, 2004
Dissecting squares into equal-area triangles Harvard Mathematics Table	October 15, 2002
Bounding the volume of hyperbolic 3-manifolds Harvard Mathematics Table	October 23, 2001
Functions growing faster than any computable function Harvard Mathematics Table	December 12, 2000

Professional activities and service

University of Chicago, Directed Reading Program, Committee Member	2006–2009
Paired undergraduates with graduate student mentors; organized undergraduate talks; designed database-driven website to monitor students' progress.	
University of Chicago, Center for Teaching and Learning, Panelist	September 2007 September 2008
Moderated a large-group discussion of teaching issues, including initial course design, midquarter course changes, assessment techniques, lecturing styles.	