

Tim Austin: Curriculum Vitae

Personal details

Full name: Timothy Derek Austin

Current mailing address: UCLA Mathematics Department
Box 951555
Los Angeles, CA 90095-1555
United States of America

Email: tim@math.ucla.edu

Web: math.ucla.edu/~tim

Education

- Ph.D. in mathematics, University of California, Los Angeles, June 2010
Thesis advisor: Prof. T.Tao
Thesis title: “Multiple recurrence and the structure of probability-preserving systems” [available online through [aps.arxiv.org/abs/1006.0491](https://arxiv.org/abs/1006.0491)]
- Certificate of Advanced Study in Mathematics (graduate course), with distinction, Trinity College, Cambridge University, 2005 – 2006
- BA mathematics (IA [first year] 1st, IB [second year] 1st, II [third year] 1st), Trinity College, Cambridge University, 2002 – 2005

Fellowships and grants

- Microsoft Graduate Research Fellow, 2009 – 2010

-
- Clay Research Fellow, 2010 – 2015
 - Principal Investigator, Simons Collaboration on Algorithms and Geometry, 2014 – 2017

Employment history

- Visiting researcher at Microsoft Research Redmond, July 3rd – July 31st 2006
- Visiting researcher at Microsoft Research Redmond, August 25th – September 19th 2008
- Research assistant, UCLA Math. Dept., September – December 2008 (fall quarter)
- Research assistant/teaching assistant (50%/50%), UCLA Math. Dept., January – March 2009 (winter quarter)
- Research assistant/teaching assistant (50%/50%), UCLA Math. Dept., March – June 2009 (spring quarter)
- Visiting researcher at Microsoft Research Redmond, June 15th – July 3rd 2009
- Research assistant, UCLA Math. Dept., July – August 2009 (summer session)
- Visiting researcher at Microsoft Research New England, August 10th – August 28th 2009
- Research Fellow for Clay Mathematics Institute, July 1st 2010 – December 31st 2014
- Visiting academic at Brown University, August 2010 – June 2012
- Assistant Professor at Courant Institute of Mathematical Sciences, September 1st 2012 – December 31st 2014
- Associate Professor at Courant Institute of Mathematical Sciences, January 1st 2015 (end of Clay Fellowship) – June 30th 2017
- Associate Professor of Mathematics at UCLA, July 1st 2017 – present

Research interests

Ergodic theory, harmonic analysis and additive combinatorics; metric geometry and its applications to geometric group theory; probability theory and rigorous statistical mechanics.

Professional activities

- Co-organizer (with Alexander Andoni and Assaf Naor), Embeddings Workshop, Isaac Newton Institute for Mathematical Sciences, January 2011
- Co-organizer (with Bryna Kra), Workshop on Discrete Methods in Ergodic Theory, Northwestern University, February 2011
- Co-organizer (with Antoine Cerfon), Mathematics Colloquium, Courant Institute, AY 2012-13
- Member of Courant Institute Fellowship Committee, Spring 2014 and Spring 2015 (for accepting applications for graduate study in Courant)
- Member of UCLA Mathematics Colloquium Committee, AY 2017-18
- Co-organizer (with Assaf Naor, Gilles Pisier, Sorin Popa and Stefaan Vaes), workshop on Approximation Properties in Operator Algebras and Ergodic Theory (part of the Long Program on Quantitative Linear Algebra), IPAM, UCLA, April 30th – May 5th, 2018.
- Co-organizer (with Miklós Abért, András Máthé and Oleg Pikhurko), workshop on Measurability, Ergodic Theory and Combinatorics, Mathematics Institute, University of Warwick (UK), July 8–12, 2019.
- Chair, UCLA Mathematics Colloquium Committee, AY 2018-19.
- Member of UCLA Mathematics Staff Search Committee, AY 2018-19.

Talks (2010 – present)

Research talks at conferences

- Geometry Festival, New York University, April 2010
- Workshop on Dynamical Systems and Related Topics, University of Maryland, April 2010
- Groups and Large Scale Geometry, University of Clermond-Ferrand, June 2010
- Oxtoby Centennial Conference, Bryn Mawr College, October 2010
- Workshop on Discrete Methods in Ergodic Theory, Northwestern University, February 2011

-
- Special session on Interactions between Dynamical Systems, Number Theory, and Combinatorics, AMS Spring Eastern Sectional Meeting, College of the Holy Cross, April 2011
 - Trends in Dynamics, Northwestern University, April 2011
 - Operator Algebras, Fudan University, June 2011
 - Dynamics on Homogeneous Spaces and Number Theory, Ohio State University, September 2011
 - Probability and Ergodic Theory Workshop, University of North Carolina, March 2012
 - Graphs and Analysis, Institute for Advanced Study, June 2012
 - Additive Combinatorics in Paris, Institut Henri Poincaré, Paris, July 2012
 - Limit Theorems in Probability, Indian Institute of Science, Bangalore, January 2013
 - Ergodic Theory with Connections to Arithmetic, University of Heraklion, June 2013
 - Neo-Classical Methods in Discrete Analysis, Simons Institute for the Theory of Computing, UC Berkeley, December 2013
 - Special session on Ergodic Theory and Symbolic Dynamics, Joint Mathematics Meetings, Baltimore, January 2014
 - British Mathematical Colloquium, April 2014
 - Midwest Dynamical Systems Conference, University of Michigan, November 2014
 - Dynamical Systems Workshop, University of Maryland, April 2015
 - Southeastern Probability Conference, Duke University, May 2015
 - Ergodic Theory and Combinatorics, University of Agder, June 2015
 - Ergodic Theory, Fractals and Groups, Israel Institute for Advanced Studies, October 2015
 - Invited Address at AMS Eastern Sectional Meeting, Bowdoin College, October 2016
 - Clay Research Conference, Oxford, September 2017

-
- Approximation Properties in Operator Algebras and Ergodic Theory, part of the Long Program on Quantitative Linear Algebra, IPAM, UCLA, May 2018
 - Ergodic Aspects of Modern Dynamics, Będlewo, Poland, June 2018
 - Advances in Asymptotic Probability, Stanford, December 2018

Minicourses and tutorials

- Minicourse at trimester “Metric Geometry, Algorithms and Groups”, Institut Henri Poincaré, March 2011
- Minicourse at “Limit Theorems in Probability”, Indian Institute of Science, Bangalore, January 2013
- Minicourse at Easter School “Dynamics and Analytic Number Theory”, Durham University, April 2014
- Tutorial series at “Additive and Analytic Combinatorics”, Institute for Mathematics and its Applications, University of Minnesota, September 2014
- Minicourse at summer school on “Graph limits, groups and stochastic processes”, MTA Rényi Institute, Budapest, September 2017
- Minicourse on measure concentration during week of tutorials for IPAM Long Program on “Quantitative Linear Algebra”, IPAM, UCLA, March 20th – 23rd, 2018

Departmental colloquia

- Princeton University, January 2010
- Vanderbilt University, December 2010
- University of Toronto, October 2013
- Korea Institute for Advanced Study, August 2015
- SUNY Stony Brook, October 2015
- University of California, Los Angeles, January 2016
- Rutgers University, March 2017
- University of Utah, December 2017

-
- Princeton University, February 2018
 - Georgia Tech, April 2018

Departmental seminars and similar

- Departmental Seminar, Ohio State University, January 2010
- Geometric Group Theory Seminar, Ohio State University, January 2010
- Departmental Seminar, SUNY Stony Brook, January 2010
- Departmental Seminar, Indiana University, Bloomington, January 2010
- Dynamics Seminar, Northwestern University, January 2010
- Departmental Seminar, UC Berkeley, January 2010
- Departmental Seminar, MIT, February 2010
- Geometry Seminar, University of Michigan, March 2010
- Group Actions Seminar, Brown University, September 2010
- Analysis Seminar, Brown University, November 2010
- Dynamical Systems Seminar, Northeastern University, November 2010
- Probability Seminar, Massachusetts Institute of Technology, November 2010
- Geometry-Topology Seminar, University of Chicago, February 2011
- Probability and Random Matrices Seminar, Harvard University, March 2011
- Operator Algebras Seminar, Université Paris 7, March 2011
- Dynamics Seminar, Korea Institute for Advanced Study, July 2011
- Theory Group Seminar, Microsoft Research New England, August 2011
- Departmental Seminar, Vanderbilt University, December 2011
- Departmental Seminar, Pennsylvania State University, February 2012
- Departmental Seminar, Williams College, September 2012
- Graduate Student/Postdoc Seminar, New York University, October 2012

-
- Combinatorics and Probability Seminar, Yale University, February 2013
 - Groups and Dynamics Seminar, Texas A& M University, February 2013
 - Probability Seminar, University of Chicago, May 2013
 - Analysis Seminar, SUNY Buffalo, September 2013
 - Geometric Analysis and Topology Seminar, New York University, October 2013
 - Group Actions and Dynamics Seminar, Yale University, February 2014
 - Seminar, Institute for Advanced Study, April 2014
 - Presentation at Simons Collaboration on Algorithms and Geometry, March 2015
 - Analysis seminar, Princeton University, April 2015
 - Departmental seminar, University of California, Los Angeles, January 2016
 - Departmental seminar, University of Texas at Austin, January 2016
 - Departmental seminar, University of Washington, January 2016
 - Departmental seminar, University of Toronto, February 2016
 - Departmental seminar, Northwestern University, February 2016
 - Departmental seminar, University of Texas at Austin, March 2017
 - Presentation at Simons Collaboration on Algorithms and Geometry, October 2017
 - Dynamical systems colloquium, Pennsylvania State University, February 2018
 - UCLA–Caltech joint analysis seminar, Caltech, March 2018
 - Probability seminar, Stanford University, April 2018
 - Probability seminar, UC Berkeley, April 2018

Teaching activities

- Teaching assistant for Graduate Real Analysis (UCLA Math-245B) for Prof. T. Tao, Winter 2009
- Teaching assistant for Introduction to Fourier Analysis (UCLA Math-133) for Prof. R. Schul, Spring 2009

-
- Lectured graduate course ‘Topics in Ergodic Theory’ at Brown University, Fall 2010
 - Lectured undergraduate course ‘Analysis II’ (NYU Math-UA 326) at New York University, Fall 2012
 - Lectured graduate course ‘Ergodic Theory’ (NYU Math-GA 2931) at New York University, Fall 2013
 - Lectured undergraduate course ‘Theory of Probability’ (NYU Math-UA 233) at New York University, Spring 2015
 - Lectured graduate courses ‘Real Variables’ (NYU Math-GA 2430) and ‘Ergodic Theory’ (NYU Math-GA 2650) at New York University, Fall 2015
 - Lectured undergraduate course ‘Theory of Probability’ (NYU Math-UA 233) at New York University, Spring 2016
 - Lectured graduate courses ‘Real Variables’ (NYU Math-GA 2430) and ‘Entropy and Ergodic Theory’ (NYU Math-GA 2650) at New York University, Fall 2016
 - Lectured undergraduate course ‘Theory of Probability’ (NYU Math-UA 233) at New York University, Spring 2017
 - Lectured graduate course ‘Entropy and Ergodic Theory’, parts I and II (UCLA Math 254A and B) at UCLA, Fall 2017 and Spring 2018
 - Lectured Graduate Real Analysis (UCLA Math-245A and 245B) at UCLA, Fall quarter 2018 and Winter quarter 2019.