

# Donald Robertson

## Contact Information

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## Positions Held

2017–Present: NSF Postdoc, Department of Mathematics, University of Utah, USA  
2015–2017: Research Assistant Professor, Department of Mathematics, University of Utah, USA

## Education

2008–2015: Mathematics PhD, Ohio State University, USA  
2005–2006: Exchange student at University of Pennsylvania, USA  
2004–2008: MPhys Mathematics & Theoretical Physics, University of St. Andrews, UK

## Papers

- [[arXiv](#)] A proof of the Erdős sunset conjecture (joint with J. Moreira and F. K. Richter) *Submitted*
- [[arXiv](#)] Ergodicity of skew products over linearly recurrent IETs (joint with J. Chaika) *Submitted*
- [[arXiv](#)] Disjointness for measurably distal group actions and applications (joint with J. Moreira and F. K. Richter) *Submitted*
- [[arXiv](#)] [Mild mixing of certain interval exchange transformations](#) *To appear in Ergodic Theory and Dynamical Systems*
- [[arXiv](#)] [Triangles in Cartesian squares of quasirandom groups](#) (joint with V. Bergelson and P. Zorin-Kranich) *Combinatorics, Probability and Computing* March 2017, Volume 26, Issue 2, Pages 161–182
- [[arXiv](#)] [Polynomial multiple recurrence over rings of integers](#) (joint with V. Bergelson) *Ergodic Theory and Dynamical Systems* August 2016, 1354–1378
- [[arXiv](#)] [Polynomial recurrence with large intersection over countable fields](#) (joint with V. Bergelson) *Israel Journal of Mathematics* July 2016, Volume 214, Issue 1, Pages 109–120

[arXiv] [Finite products sets and minimally almost periodic groups](#) (joint with V. Bergelson, C. Christopherson and P. Zorin-Kranich) *Journal of Functional Analysis* March 2016, Volume 270, Issue 6, Pages 2126–2167

[arXiv] [Characteristic factors for commuting actions of amenable groups](#) *Journal d'Analyse Mathématique* July 2016, Volume 129, Issue 1, Pages 165–196

## Theses

Characteristic factors for multiple recurrence and combinatorial applications, Ph.D. thesis, Vitaly Bergelson advising, Ohio State University

Subgroups of rationals, MPhys thesis, Nik Ruškuc advising, University of St. Andrews

## Talks

Dynamical Systems Seminar, Penn State University, February 2016

Ergodic Theory Seminar, Ohio State University, February 2016

Ergodic Theory and Statistical Mechanics Seminar, Princeton University, December 2016

AMS Sectional Meeting, University of Memphis, October 2015

Dynamical Systems Seminar, Brigham Young University, October 2015

Max Dehn Seminar, University of Utah, August 2015

Combinatorics Meets Ergodic Theory, BIRS, July 2015

AMS Sectional Meeting, Georgetown University, March 2015

Dynamical Systems Seminar, Northwestern University, January 2015

Ergodic Theory Seminar, Ohio State University, November 2014

Math Department Seminar, Texas Southern University, September 2014

Logic, Dynamics and Their Interactions II, University of North Texas, June 2014

Ergodic Theory Seminar, UIUC, February 2014

Ergodic Theory Seminar, Ohio State University, Spring 2014

Ergodic Theory Seminar, Ohio State University, February 2013

Graduate Student Seminar, University of St Andrews, Autumn 2007

## Outreach

Undergraduate Colloquium, University of Utah, November 2016

Undergraduate Colloquium, University of Utah, February 2016

What Is...? Seminar, Ohio State University, July 2014

What Is...? Seminar, Ohio State University, June 2010

What Is...? Seminar, Ohio State University, July 2009

## **Teaching**

Foundations of Real Analysis I Lecturer, University of Utah, Spring 2017

Introduction to Differential Equations Lecturer, University of Utah, Spring 2016, Autumn 2016

Partial Differential Equations for Engineers Lecturer, University of Utah: Autumn 2015

Graduate Analysis Qualifying Exam Class TA, Ohio State University: Summer 2013

Calculus III Lecturer, Ohio State University: Summer 2011

Calculus II Lecturer, Ohio State University: Summer 2010

Trigonometry TA, Ohio State University: Autumn 2014, Spring 2014

Mathematical Topics for Engineers, Ohio State University: Spring 2015, Autumn 2013

Calculus III TA, Ohio State University: Autumn 2012, Winter 2011

Calculus II TA, Ohio State University: Autumn 2010, Spring 2010, Autumn 2009

Calculus I TA, Ohio State University: Spring 2012

Mathematics for Business TA, Ohio State University: Winter 2012, Winter 2010

College Algebra TA, Ohio State University: Autumn 2011

Ordinary and Partial Differential Equations TA, Ohio State University: Spring 2011

## **Conferences Attended**

AMS Sectional Meeting, University of Utah, April 2016

Midwest Dynamical Systems Meeting, Ohio State University, November 2015

AMS Sectional Meeting, University of Memphis, October 2015

Combinatorics Meets Ergodic Theory, BIRS, July 2015

Ergodic Theory and Combinatorics Conference, University of Agder, June 2015

AMS Sectional Meeting, Georgetown University, March 2015

Midwest Dynamical Systems Meeting, University of Michigan, November 2014

Dynamics, Geometry and Groups, IUPUI, October 2014

5th Pingree Park Dynamics Workshop, July 2014

Logic, Dynamics and Their Interactions II, University of North Texas, June 2014

Ergodic Theory Workshop, UNC Chapel Hill, April 2014

Informal Analysis Seminar, Kent State University, March 2014

## **Awards**

2013: Special Graduate Appointment, Spring Semester, Ohio State University

2008: First-Year Fellowship, Ohio State University

2007: Neil Arnott Physics Prize, University of St. Andrews

2005: Robert Lincoln McNeil Scholarship for study at University of Pennsylvania