Richard A. P. Birkett - Curriculum Vitæ

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EMPLOYMENT

Current	Tamarkin Assistant Professor, Brown University, RI, USA
Aug 2023 – Aug 2025	Research Assistant Professor, University of Illinois at Chicago, IL, USA

EDUCATION

2023	PhD in Mathematics, University of Notre Dame, IN, USA
	Thesis: Algebraic Stability and Skew Products on the Berkovich Projective Line
	Advisor: Jeffrey Diller
2020	MS in Mathematics, University of Notre Dame, IN, USA
2018	MMath in Part III of the Mathematical Tripos, University of Cambridge, UK
2017	MA (Cantab) in the Mathematical Tripos, University of Cambridge, UK

AWARDS

2023	Richard Sady Dissertation Prize, University of Notre Dame
2019	Richard Sady Prize, University of Notre Dame
	Awarded to the best second year graduate student based on performance in courses took in their first year.
2017	Scholar of the College, Jesus College, University of Cambridge
	For distinguished examination performance in Part II Tripos examinations.
2014	Exhibitioner of the College, Jesus College, University of Cambridge
	For distinguished examination performance in Part IA Tripos examinations.

PUBLICATIONS AND PREPRINTS

2025	Rational Inner Skew Products
	In preparation with Alan Sola, Jasmin Raissy, Liz Vivas.
2025	Rational Maps of an Elliptic Surface
	In preparation with Giacomo Mezzedimi.
2024	The Calculus of Blowups on a Ruled Surface
	In final preparation.
2023	Algebraic Stability for Skew Products
	Available on ArXiv : https://arxiv.org/abs/2408.02658.
2023	Skew Products on the Berkovich Line
	Available on ArXiv : https://arxiv.org/abs/2310.17628.
2021	On the Stabilisation of Rational Surface Maps
	Annales de la Faculté des sciences de Toulouse : Mathématiques, Serie 6, Volume 34 (2025) no. 1, pp. 47-74.
	Available on ArXiv : https://arxiv.org/abs/2110.00095.

TEACHING RESPONSIBILITIES

BROWN UNIVERSITY

Fall 2025	Lecturer: Single Variable Calculus, Part I

UNIVERSITY OF ILLINOIS AT CHICAGO

Fall 2024	Lecturer: Calculus III
Spring 2023	Lecturer: Introduction to Advanced Mathematics
	First course in mathematical problem solving and communication. Flipped classroom format.
	Topics: proofs, number theory, logic, combinatorics, set theory, writing and notation.
Fall 2023	Lecturer: Calculus III
	UNIVERSITY OF NOTRE DAME
Fall 2022	Teaching Assistant: Linear Algebra & Differential Equations
Spring 2022	Teaching Assistant: Glynn Mathematics Seminar II
	Honors course for non-science based undergraduates. Topics: graph theory, topology, knot theory.
Spring 2021	Lecturer: Calculus III
Fall 2020	Grader: Graduate Complex Analysis
Summer 2020	Lecturer: Calculus III
	Flipped classroom format.
Spring 2020	Teaching Assistant: Linear Algebra & Differential Equations
Fall 2019	Teaching Assistant: Calculus III

INVITED TALKS

Oct 2025	AMS Fall Central Sectional Meeting, St Louis University
	Special Session: Algebraic and Arithmetic Dynamics
	Elliptic Skew Products
May 2025	Dynamics Seminar, University of Chicago
	Algebraic Stability and Rational Maps on a Surface
Apr 2025	AMS Spring Central Sectional Meeting, University of Kansas
	Special Session: Current Trends in Complex Dynamics
	An Overview of Algebraic Stability
Apr 2024	AMS Spring Central Sectional Meeting, University of Wisconsin–Milwaukee
	Special Session: Panorama of Holomorphic Dynamics
	Rational Maps and the Calculus of Blowups
Mar 2024	Dynamics Seminar, The Ohio State University
	Algebraic Stability and Rational Maps on a Surface
Jan 2023	Joint Mathematics Meeting 2023, Boston
	AMS Special Session on Recent Advances in Arithmetic Dynamics
	Skew Products on the Berkovich Projective Line
Dec 2022	Algebra Seminar, Pennsylvania State University
	Non-Ideal Algebraic Geometry with Berkovich Space
Nov 2022	Midwest Dynamical Systems Conference, IUPUI
	The Dynamics of Rational Skew Products
Oct 2022	Dynamics Seminar, University of Michigan
	Algebraic Stability and Skew Products
May 2022	Workshop in Arithmetic and Algebraic Dynamics, Harvard University
	The Dynamics of Rational Skew Products
Mar 2022	Complex Dynamics School, IUPUI
	Kähler Manifolds
Nov 2021	Dynamical Systems Seminar, IUPUI
	Stabilising Birational Surface Maps
Feb 2018	GATEWAY Seminar Series, University of Warwick
	Critical Recurrence in the Mandelbrot Set

CONFERENCES ORGANISED

Oct 2023	Midwest Dynamical Systems Conference, University of Illinois at Chicago
	Co-organised with Ben Call, Alex Furman, Osama Khalil, Nicole Looper, Wouter Van Limbeek (UIC), Chris McCord (NIU).
May 2022	Midwest Dynamical Systems Early Career Conference, University of Notre Dame
	Co-organised with Ethan Farber (Boston College) and Katelynn Huneycutt (Ohio State).

CONFERENCES ATTENDED

Apr 2025	AMS Spring Central Sectional Meeting, University of Kansas
Jan 2025	Etats de la recherche: "dynamique arithmétique, algébrique, et analytique" CIRM, France
Sep 2024	Big Ideas in Dynamics and Geometry, University of Illinois at Chicago
Jul 2024	Birational Geometry and Dynamics, SwissMAP Research Station, Switzerland
	Lightning talk: A Universal Property for Algebraic Stabilisation
Apr 2024	AMS Spring Central Sectional Meeting, University of Wisconsin–Milwaukee
Jan 2023	Joint Mathematics Meeting 2023, Boston
May 2022	Workshop in Arithmetic and Algebraic Dynamics, Harvard University
May 2022	Berkeley Adventurous Complex Dynamics Workshop, MSRI
	Poster: The Dynamics of Rational Skew Products
Apr 2022	Midwest Several Complex Variables, University of Notre Dame
Mar 2022	Complex Dynamics School, IUPUI
Feb 2022	Introductory Workshop: Complex Dynamics, MSRI (remote)
Feb 2022	Connections Workshop: Complex Dynamics, MSRI (remote)
Nov 2021	Midwest Dynamical Systems Conference, Northwestern University
Oct 2021	Quantitative Aspects in Complex Analysis, Geometry and Dynamics, Lille (remote)
Nov 2020	Midwest Dynamical Systems Early Career Conference, remote
Mar 2020	Winter Dynamics Day, Northwestern University
Nov 2019	Fall Dynamics Day, Northwestern University
Nov 2019	Midwest Dynamical Systems Conference, University of Illinois at Chicago
May 2019	Midwest Dynamical Systems Early Career Conference, The Ohio State University

SELECTED SERVICE AND OUTREACH

Feb 2024	Guest speaker in UIC Math Club
	"Pursuit and Evasion: Zeno, a Lion, and some Dynamics"
2023 – 2024	Organiser of Dynamical Systems Seminar at University of Illinois at Chicago
Apr 2023	Mathematics workshop at 'Expanding Your Horizons', Notre Dame, IN
	Organised with Wern Yeong, Lorenzo Riva, Luca Nijim (University of Notre Dame)
Mar 2023	Study Group Guide, Arizona Winter School
Jan 2023	Mathematics Exhibition for 'Science Alive', St Joseph County Public Library, IN
	Organised with Wern Yeong and Lorenzo Riva (University of Notre Dame)
2021 – 2022	President of the Notre Dame Mathematics Graduate Student Association
Summer 2019	Instructor and Organiser: Numbers, Sets and Graphs
	Undergraduate reading group.
2017	Volunteer at the University of Cambridge Maths Open Days
2015	Guest speaker at Hereford Sixth Form College
	"To Infinity and Beyond"

2015   Guest speaker John Masefield High School
"Colour by Numbers"

2015   Guest speaker John Masefield High School
"To Infinity and Beyond"

2014, 2015   Volunteer STEP tutor at Hereford Sixth Form College

SKILLS & EXPERIENCE

Fall 2019   Full credit course "Pedagogy and Practice in the College Classroom", Notre Dame

Summer 2019   Summer School on Dynamical Systems, University of Houston

2017   Summer Undergraduate Research Project (SUROP), University of Cambridge
"Critical Recurrence in the Mandelbrot Set", supervised by Holly Krieger.

Last updated on 2025-10-22.