

# Max Weinreich

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**POSTDOC** National Science Foundation July 2022 – June 2024  
Mathematical Sciences Postdoctoral Research Fellowship  
Harvard University, Cambridge, MA  
Supervised by Dr. Laura DeMarco

**EDUCATION** Brown University, Providence, RI August 2017 – May 2022  
PhD in Mathematics (May 2022)  
Thesis: *Algebraic dynamics, moduli spaces, and integrability*  
M.S. in Mathematics (May 2019)  
Advisor: Joseph H. Silverman

Yale University, New Haven, CT August 2012 – May 2016  
B.A. in Mathematics (intensive)  
Cum laude, Distinction in the Major

**PAPERS**

6. *The dynamical degree of billiards in an algebraic curve.*  
46 pages. Preprint at [arXiv:2305.14287](https://arxiv.org/abs/2305.14287).
5. *GIT stability of linear maps on projective space with marked points.*  
32 pages. Preprint at [arXiv:2111.06351](https://arxiv.org/abs/2111.06351).
4. *Dynamical moduli spaces and polynomial endomorphisms of configurations.*  
(with Talia Blum, John Doyle, Trevor Hyde, Colby Kelln, and Henry Talbott)  
*Arnold Math. J.* 8. 2022. 33 pages.
3. *The algebraic dynamics of the pentagram map.*  
*Ergod. Th. & Dynam. Sys.* 2022. 46 pages.
2. *Automorphism groups of endomorphisms of  $\mathbb{P}^1(\overline{\mathbb{F}}_p)$*  (with J. Cai, B. Hutz, and L. Mayer)  
*Glasgow Math. J.* 65(1). 2022. 34 pages.
1. *Counting Arcs in Projective Planes via Glynn's Algorithm* (with N. Kaplan, S. Kimport, R. Lawrence, L. Peilen).  
*J. Geom.* (2017) 108: 1013. 17 pages.

**AWARDS** NSF Mathematical Sciences Postdoctoral Research Fellowship 2022 – 2024  
(Grant No. 2202752)  
NSF Graduate Research Fellowship 2017 – 2022  
(Grant No. 2040433)

**TALKS GIVEN** Algebraic Geometry Seminar, University of Milan, May 2023

Algebraic Geometry Seminar, Boston College, February 2023

Special Session on Recent Advances in Arithmetic Dynamics I, Joint Mathematics Meetings, January 2023

Algebraic Dynamics Seminar, Harvard University, November 2022

Five Colleges Number Theory Seminar, Amherst College, November 2022

Arithmetic Dynamics Special Session, AMS Western Sectional Meeting, October 2022

Geometry and Dynamics Seminar, Tufts University, September 2022

Algebra, Geometry, and Number Theory Seminar, Leiden University (online), September 2022

Harvard-MIT Algebraic Geometry Seminar, September 2022

Algebraic Dynamics Workshop, Harvard University, May 2022

Joint Math-Physics Seminar, University of Pennsylvania, April 2022

Several Complex Variables School, IUPUI, March 2022

Moduli Across the Pandemic, Boston College, online, February 2022

Algebra Seminar, Brown University, November 2021

BUGCAT: Binghamton University Graduate Combinatorics, Algebra, and Topology, November 2021

AGNES: Algebraic Geometry Northeastern Series, Boston College, October 2021

Geometry-Topology Seminar, Brown University, October 2021

Algebraic Dynamics Seminar, Harvard University, August 2021 (online)

Hamiltonian Systems Seminar, University of Arizona / University of Toronto, April 2021 (online)

Rutgers Graduate Number Theory Seminar, March 2021 (online)

Graduate Student Seminar, Brown University, February 2021 (online)

Brown University Algebra Seminar, October 2020 (online)

Rutgers Graduate Number Theory Seminar, April 2020 (online)

Summer@ICERM Computational Arithmetic Dynamics REU, Brown University, July 2019

CatNiP (Categorical Notions in Providence) Seminar, Brown University, April 2019

Graduate Student Seminar, Brown University, February 2019

Graduate Student Seminar, Brown University, April 2018  
 SUMS Lecture Club, February 2016  
 Undergraduate REU Summer Mini-Conference, August 2015  
 SUMS Lecture Club, August 2015  
 SUMS Lecture Club, January 2015  
 SUMS Lecture Club, August 2014

**WORKSHOPS  
 AND  
 CONFERENCES**

Arizona Winter School (project assistant), March 2023  
 Joint Mathematics Meetings (organizer of Special Session), Boston, MA, January 2023  
 AMS Western Sectional Meeting, Salt Lake City, UT, October 2022  
 ICM Day at ICERM, June 2022  
 Circle at Infinity: McMullen Birthday Conference, Harvard University, June 2022  
 Algebraic Dynamics Workshop, Harvard University, May 2022  
 Adventurous Berkeley Complex Dynamics, MSRI, May 2022  
 Several Complex Variables School, IUPUI, March 2021  
 AIM Workshop on Moduli Spaces of Dynamical Systems, September 2021  
 AMS Sectional Meeting, Virtual, March 2021  
 Combinatorial Algebraic Geometry Introductory Workshop, ICERM, virtual, February 2021  
 Joint Mathematics Meetings Special Session on Arithmetic Dynamics, virtual, January 2021  
 Arizona Winter School, March 2020  
 Facets of Algebraic Geometry, University of Michigan, October 2019  
 Connecticut Number Theory Summer School, University of Connecticut, June 2018  
 AMS Sectional Meeting, Northeastern University, March 2018  
 AMS Graduate Student Conferences at Brown University, 2017–2019

**TEACHING**

*Brown University – Calculus 0100 Teaching Fellow* Spring 2020  
*Brown University – Calculus 0100 Teaching Assistant* Fall 2019

*Summer@ICERM Computational Arithmetic Dynamics REU*  
*Research Teaching Assistant* Summer 2019

*Prison Teaching (CCRI Basic Algebra, Course 0099)* Fall 2018

*Mathematics Tutor and Curriculum Developer* 2016 – 2017  
*Praxis Tutors, Brooklyn, NY*

**ACADEMIC  
SERVICE**

*Arizona Winter School, project assistant, March 2023*

*AWS-AWM Special Session on Complex and Arithmetic Dynamical Systems, Joint  
Mathematics Meetings, co-organizer with Laura DeMarco and Myrto Mavraki, Jan-  
uary 2023*

*Every Kind of Moduli Space virtual seminar, co-organizer, Fall 2021*

*Brown Algebra seminar, co-organizer, Fall 2020*

*Brown Graduate Student Seminar, organizer, Fall 2020*

*Brown arithmetic dynamics reading group, organizer, 2020*

*Prison Teaching (see TEACHING)*

*AMS Student Conferences at Brown University, 2018, co-organizer*

*Webmaster for the Graduate Student Seminar, 2019*

**TECH**

*Languages: Sage, Python, VBA, C-Sharp, Java, Scheme*

**NON-  
ACADEMIC  
WORK**

*Protedyne, short-term consulting:* 2021  
*Incidence geometry for COVID-19 pooled testing*