

Niki Myrto Mavraki

CONTACT INFORMATION	Department of Mathematical & Computational Sciences University of Toronto (Mississauga) 3359 Mississauga Road Deerfield Hall, 3008K Mississauga, ON L5L 1C6	<i>email:myrto.mavraki@utoronto.ca</i>
RESEARCH INTERESTS	Number Theory, Arithmetic Geometry, Dynamical Systems, Arithmetic Dynamics	
EMPLOYMENT	University of Toronto Assistant Professor, 2023- present Harvard University , Boston, USA Benjamin Peirce fellow, 2020 - 2023 University of Basel Postdoctoral researcher, 2019 - 2020 Northwestern University Boas Assistant Professor of Mathematics, 2018 - 2019	
EDUCATION	University of British Columbia Ph.D. in Mathematics, May 2014 - May 2018 Advisor: Dragos Ghioca Thesis: Unlikely intersections and equidistribution with a dynamical perspective M.Sc. in Mathematics, September 2012 - May 2014 Advisor: Dragos Ghioca Thesis: Variation of the canonical height in a family of rational maps National and Kapodistrian University of Athens B.Sc. in Mathematics, 2008 - 2012	
GRANT	<ul style="list-style-type: none">• NSF Grant DMS-2200981, Unlikely Intersections in Diophantine Geometry and Dynamics 2022-2025	
PREPRINTS AND PUBLICATIONS	Peer-reviewed, accepted articles	

- Dynamics on \mathbb{P}^1 : preperiodic points and pairwise stability with Laura DeMarco,
Compositio Mathematica, to appear

Peer-reviewed, published articles

- Height coincidences in products of the projective line with Harry Schmidt and Robert Wilms,
Mathematische Zeitschrift, volume 304, issue 2 (2023)
- Elliptic surfaces and intersections of adelic \mathbb{R} -divisors with Laura DeMarco,
Journal of the European Math Society, doi: 10.4171/JEMS/1354
- Variation of Canonical Height for Fatou points on \mathbb{P}^1 with Laura DeMarco.
Journal für die reine und angewandte Mathematik (Crelle), <https://doi.org/10.1515/crelle-2022-0078>
- Quasi-adelic measures and equidistribution on \mathbb{P}^1 with Hexi Ye,
Ergodic Theory and Dynamical Systems, 2022, 1-48. doi:10.1017/etds.2022.49
- Variation of canonical height and equidistribution with Laura DeMarco,
American Journal of Mathematics, 2020, vol. 142, no. 2, 443–473
- Algebraic approximations to linear combinations of powers: an extension of results by Mahler and Corvaja-Zannier with Avinash Kulkarni and Khoa D. Nguyen
Transactions of the AMS, 2019, vol. 371, 3787-3804
- Impossible intersections in a Weierstrass family of elliptic curves,
Journal of Number Theory, 2016, vol. 169, 21-40
- Variation of the canonical height in a family of rational maps with Dragos Ghioca
New York Journal of Mathematics, 2013, vol. 19, 873-907

Submitted articles

- Arithmetic dynamics of random polynomials with Pierre Le Boudec.
- A dynamical Shafarevich theorem for endomorphisms of projective space with Jamie Juul, Holly Krieger and NicoleLooper.
- On the dynamical Bogomolov conjecture for families of split rational maps with Harry Schmidt.

**HONOURS,
AWARDS AND
FELLOWSHIPS**

- Governor General's Gold Medal for the graduate student who has achieved most outstanding academic record as a Master's student completing a thesis
University of British Columbia, Vancouver, Canada, 2015.
- Faculty of Science Graduate Prize
University of British Columbia, Vancouver, Canada, 2015.
- Four Year Doctoral Fellowship
University of British Columbia, Vancouver, Canada, 2014 - 2018.
- Faculty of Science Graduate Fellowship

University of British Columbia, Vancouver, Canada, 2012 - 2014.

- **Onassis Foundation Fellowship**
Onassis Foundation, Athens, Greece, 2012 - 2014.
- Amongst top 3 students in the Mathematics department
National and Kapodistrian University of Athens, Athens, Greece, 2008- 2012.

INVITED TALKS

- **Dynamics and Asymptotics in Algebra and Number Theory**
Bielefeld, Germany, September 2023
- **Workshop on Degeneracy of algebraic points**
MSRI, California, USA, April 2023
- **Women in Arithmetic Geometry**
Heidelberg, Germany, September 2022
- **Simons Symposium on Algebraic, Complex and Arithmetic Dynamics**
Schloss Elmau, Germany, August 2022
- **Equidistribution and Arithmetic Dynamics (Plenary talk)**
Oklahoma State University, USA, June 2022
- **Berkeley Arithmetic Geometry and Number Theory Seminar**
Zoom, April 2022
- **Harvard Number Theory Seminar**
MA, USA, March 2022.
- **Number Theory Web Seminar**
Zoom, November 2021.
- **Banff Workshop: Algebraic Dynamics and its Connections to Difference and Differential Equations**
Zoom, November 2021.
- **Joint Columbia-CUNY-NYU Number Theory Seminar**
Zoom, November 2021.
- **Five College Number Theory Seminar**
Zoom, November 2021.
- **MIT Number Theory Seminar**
October 2021.
- **Arithmetic Dynamics International Online Seminar (ADIOS)**
Zoom, October 2021.
- **Harvard Algebraic Dynamics Seminar**
MA, USA, September 2021.
- **University of Rochester Number Theory Seminar**
Zoom, May 2021.
- **Oklahoma State University Number Theory Seminar**
Zoom, .
- **Harvard Number Theory Seminar**
Zoom, January 2020.
- **MAGIC Michigan – Arithmetic Geometry Initiative – Columbia**
Zoom, October 2020.

- \mathbb{N}^3 -days XII
DTU Copenhagen, May 2020.
- Adios Arithmetic Dynamics International Online Seminar
Zoom, April 2020.
- *University of Michigan Complex Analysis, Dynamics and Geometry Seminar*
Michigan, USA, February 2020.
- 9th swiss-french workshop in Algebraic Geometry
Charmey, Switzerland, January 2020.
- Complex Dynamics in the Southern Hemisphere
Santiago, Chile, January 2020.
- *Scuola Normale Superiore Number Theory Seminar*
Pisa, Italy, November 2019.
- 2019 Midwest dynamical systems early career conference
Ohio State University, USA, May 2019.
- 2019 AMS Joint Sectional Meeting
Hawaii, USA, March 2019.
- *Northwestern University Dynamics Seminar*
Northwestern University, Evanston, USA, November 2018.
- *Conference on Diophantine Approximation and Transcendence*
CIRM, France, September 2018.
- *University of Basel Number Theory Seminar*
Basel, Switzerland, June 2018.
- *2018 Joint Mathematics Meetings*
San Diego, USA, January 2018.
- *2017 CMS Winter Meeting*
Waterloo, Canada, December 2017.
- *University of Washington Number Theory Seminar*
Seattle, USA, October 2017.
- *Mathematical Congress of the Americas 2017*
Centre Mont-Royal and McGill University, Canada, July 2017.
- *Northwestern University Dynamics Seminar*
Northwestern University, Evanston, USA, January 2017.
- *Workshop on Interactions between Model Theory and Arithmetic Dynamics*
The Fields Institute, Canada, July 2016.
- *2016 Canadian Mathematical Society (CMS) Summer meeting*
University of Alberta, Canada, June 2016.
- *Pacific Northwest Number Theory Conference*
Oregon State University, USA, May 2016.
- *UBC Number Theory Seminar*
University of British Columbia, Vancouver, Canada, January 2016.
- *RTG Workshop on Arithmetic Dynamics*
University of Michigan, USA, December 2015.
- *11th PIMS Young Researchers Conference*

- University of British Columbia, Vancouver, Canada, June 2014.
- *Graduate Student Seminar*
University of British Columbia, Vancouver, Canada, March 2014.
- *UBC Number Theory Seminar*
University of British Columbia, Vancouver, Canada, November 2013.

- ACADEMIC VISITS
- **Thematic Program on Unlikely Intersections, Heights, and Efficient Congruencing**
The Fields Institute, Canada, 8-28 February 2017.

TEACHING
EXPERIENCE

- Harvard University**, Boston, USA
- Instructor for **Math 112**: Introductory real analysis, *Spring, 2023*
 - Instructor for **Math 122**: Algebra 1, *Fall, 2022* (links lead to our Canvas page)
 - Instructor for **Math 254R**: Topics in arithmetic dynamics, (*graduate course*) *Spring, 2022*
 - Instructor for **Math 101**: Sets, Groups and Topology, *Spring, 2022*
 - Instructor for **Math 122**: Algebra 1, *Fall, 2021*
 - Instructor for **Math 21b**: Linear Algebra and Differential Equations, *Spring, 2021* (taught 2 sections, over Zoom)
 - Instructor for **Math 122**: Algebra 1, *Fall, 2020* (over Zoom)
- University of Basel**, Basel, Switzerland
- Exercise classes: *Linear Algebra, Spring, 2020*
 - Exercise classes: *Complex analysis, Fall, 2019*
- Northwestern University**, Evanston, USA
- Instructor for **Math 230**: Differential Calculus of Multivariable Functions, *Winter Quarter, 2019* (taught 2 sections)
 - Instructor for **Math 224**: Integral Calculus in One-Variable, *Fall Quarter, 2018* (taught 2 sections)
- University of British Columbia**, Vancouver, Canada
- Instructor for **Math 110**: Differential Calculus, *Winter Term 1, 2016*
[Math 110 course webpage.](#)
 - Instructor for **Math 102**: Differential Calculus with Applications to Life Sciences, *Winter Term 1, 2014*
[Math 102 course webpage.](#)
 - Teaching Assistant: Tutor in Math Learning Center (2012-2014) as well as grader for various undergraduate courses (2012-2018).

SERVICE

- Organizing**
- Co-organizing a special session at Complex and Arithmetic Dynamical Systems in Joint Mathematics Meetings in Boston, MA, January, 2023
 - Co-organized the **Math Table**, a colloquium for undergraduate students at Harvard, 2021-2022.

- Ran an open problem session for the session at Algebraic Geometry in dynamics in AMS Spring Eastern Sectional meeting, March, 2021.

Committee work at Harvard University

- Admissions Committee, 2022-2023.
- Undergraduate Events Committee, 2021-2022.
- Colloquium Committee, 2021-2022.
- 2:1 Advisor Committee, 2020-2021.

SELECTED
CONFERENCES
ATTENDED/
UPCOMING

- Workshop on Degeneracy of algebraic points
MSRI, California, USA, April 2023
- Simons Foundation Symposium in Algebraic, Complex and Arithmetic Dynamics
Elmau, Germany, August 2022
- Workshop - Diophantische Approximationen
Oberwolfach, Germany, April 2022.
- Moduli spaces for algebraic dynamical systems
American Institute of Mathematics, San Jose, California, USA, September 2021.
- 9th swiss-french workshop in Algebraic Geometry
Charmey, Switzerland, February 2020.
- Complex Dynamics in the Southern Hemisphere
Santiago, Chile, January 2020.
- Women in Numbers Europe 3
Rennes, France, August 2019.
- Simons Foundation Symposium in Algebraic, Complex and Arithmetic Dynamics
Elmau, Germany, May 2019
- Conference on Diophantine Approximation and Transcendence
CIRM, France, September 2018.
- Workshop on Arithmetic and Complex Dynamics
Casa Matemática Oaxaca, Mexico, 12-17 November 2017.
- Families of algebraic dynamical systems
Rennes, France, 12-16 June 2017.
- Workshop on Interactions between Model Theory and Arithmetic Dynamics
The Fields Institute, Canada, 25-29 July 2016.
- RTG Workshop on Arithmetic Dynamics
University of Michigan, Ann Arbor, USA, 3-6 December 2015.
- Non-Archimedean Geometry and its Applications
University of Michigan, Ann Arbor, USA, 1-5 June 2015.

- Arizona Winter School 2015: Arithmetic and Higher-Dimensional Varieties
University of Arizona, Tucson, USA, 14-18 March 2015.
- Model Theory and its Interactions with Number Theory and Arithmetic Geometry
MSRI, Berkeley, USA, 10-11 February 2014.
- Introductory Workshop: Model Theory, Arithmetic Geometry and Number Theory
MSRI, Berkeley, USA, 3-7 February 2014.

LANGUAGES

Greek (native), English (fluent), German (basic)