

Niki Myrto Mavraki

CONTACT INFORMATION Department of Mathematics
Northwestern University
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My website

RESEARCH INTERESTS Number Theory, Arithmetic Dynamics, Arithmetic Geometry

EMPLOYMENT **Northwestern University**, Evanston, USA
Boas Assistant Professor of Mathematics, August 2018 - present

EDUCATION **University of British Columbia**, Vancouver, Canada
Ph.D. in Mathematics, May 2014 - May 2018
Advisor: Dragos Ghioca
M.Sc. in Mathematics, September 2012 - May 2014
Advisors: Dragos Ghioca, Stephanie van Willigenburg
Thesis: Variation of the canonical height in a family of rational maps

National and Kapodistrian University of Athens, Athens, Greece
B.Sc. in Mathematics, 2008 - 2012

PREPRINTS AND PUBLICATIONS

- 1) **Variation of canonical height and equidistribution** *with Laura De-Marco*,
To appear, American Journal of Mathematics
- 2) **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, published electronically November 2018
- 3) **Impossible intersections in a Weierstrass family of elliptic curves**,
Journal of Number Theory, 2016, vol. 169, 21-40
- 4) **Variation of the canonical height in a family of rational maps**
with Dragos Ghioca
New York Journal of Mathematics, 2013, vol. 19, 873-907
- 5) **Quasi-adelic measures and equidistribution on \mathbb{P}^1** *with Hexi Ye*,
submitted for publication

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

- ***Conference on Diophantine Approximation and Transcendence***
CIRM , France, September 2018.
Title: Arithmetic equidistribution and elliptic curves.
- ***University of Basel Number Theory Seminar***
Basel, Switzerland, June 2018.
Title: A variation of heights and small points in families of elliptic curves.
- ***2018 Joint Mathematics Meetings***
San Diego, USA, January 2018.
Title: Equidistribution and preperiodic points for families of rational maps.
- ***2017 Canadian Mathematical Society (CMS) Winter Meeting***
Waterloo, Canada, December 2017.
Title: Dynamics and small points in families of elliptic curves.
- ***University of Washington Number Theory Seminar***
Seattle, USA, October 2017.
Title: Dynamics and small points in families of elliptic curves.
- ***Mathematical Congress of the Americas 2017***
Centre Mont-Royal and McGill University, Canada, July 2017.
Title: Quasi-adelic measures, equidistribution and preperiodic points for families of rational maps.
- ***Northwestern University Dynamics Seminar***
Northwestern University, Evanston, USA, January 2017.
Title: Dynamics and small points in families of elliptic curves.
- ***Workshop on Interactions between Model Theory and Arithmetic Dynamics***
The Fields Institute, Canada, July 2016.
Title: Impossible intersections in a Weierstrass family of elliptic curves.
- ***2016 CMS Summer meeting***
University of Alberta, Canada, June 2016.
Title: Impossible intersections in a Weierstrass family of elliptic curves.
- ***Pacific Northwest Number Theory Conference***
Oregon State University, USA, May 2016.
Title: Impossible intersections in a Weierstrass family of elliptic curves.
- ***RTG Workshop on Arithmetic Dynamics***
University of Michigan, USA, December 2015.

Title: Impossible intersections in a Weierstrass family of elliptic curves.

OTHER TALKS

- ***Northwestern University Dynamics Seminar***
Northwestern University, Evanston, USA, November 2018.
Title: Equidistribution and preperiodic points for families of rational maps.
- ***UBC Number Theory Seminar***
University of British Columbia, Vancouver, Canada, January 2016.
Title: Impossible intersections in a Weierstrass family of elliptic curves.
- ***11th PIMS Young Researchers Conference***
University of British Columbia, Vancouver, Canada, June 2014.
Title: Unlikely Intersections and a Variation of Heights.
- ***Graduate Student Seminar***
University of British Columbia, Vancouver, Canada, March 2014.
Title: Arithmetic Dynamics.
- ***UBC Number Theory Seminar***
University of British Columbia, Vancouver, Canada, November 2013.
Title: Variation of the canonical height for a family of rational maps.

ACADEMIC VISITS

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

TEACHING
EXPERIENCE

Northwestern University, Evanston, USA

Instructor for *Math 230: Differential Calculus of Multivariable Functions*, Winter Quarter, 2019

Instructor for *Math 224: Integral Calculus in One-Variable*, Fall Quarter, 2018

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).

CONFERENCES
ATTENDED/
UPCOMING

- **2018 Joint Mathematics Meetings**
San Diego, USA, 10-13 January 2018.
- **2017 CMS Winter Meeting**
Waterloo, Canada, 8-11 December 2017.
- **Workshop on Arithmetic and Complex Dynamics**
Casa Matemática Oaxaca, Mexico, 12-17 November 2017.

- **Mathematical Congress of the Americas 2017**
McGill University, Canada, 24-28 July 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.
- **2016 CMS Summer meeting**
University of Alberta, Canada, 24-27 June 2016.
- **Pacific Northwest Number Theory Conference**
Oregon State University, USA, 14-15 May 2016.
- **2016 Joint Mathematics Meetings**
Seattle, USA, 6-9 January 2016.
- **RTG Workshop on Arithmetic Dynamics**
University of Michigan, Ann Arbor, USA, 3-6 December 2015.
- **Arithmetic 2015: Silvermania**
Brown University, Providence, USA, 11-15 August 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.
- **11th PIMS Young Researchers Conference**
University of British Columbia, Vancouver, Canada, 2-4 June 2014.
- **Pacific Northwest Number Theory Conference 2014**
Simon Fraser University, Vancouver, Canada, 17-18 May 2014.
- **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)