

Education

- 2014– **Doctor of Philosophy**, *Uppsala University*, Uppsala.
Mathematics
- 2012–2014 **Master of Science**, *Uppsala University*, Uppsala.
Mathematics

PhD thesis

- title Dynamics of area-preserving Hénon-like maps
supervisors Denis Gaidashev and Jordi-Lluís Figueras
description Studying properties of invariant Cantor sets of infinitely renormalizable area-preserving maps.

Master thesis

- title Legendrian Approximations
supervisors Tobias Ekholm
description Finding Legendrian approximations of 2-dimensional submanifolds of \mathbb{R}^5 with the standard contact structure.

Experience

Vocational

- 2014– **PhD Student**, *Uppsala University*, Uppsala.
Study and research in the area of dynamical systems and teaching general mathematics.
- 2016 **Visiting Research Scholar**, *Stony Brook University*, Stony Brook.
Research in dynamical systems.
- 2011–2014 **Amanuens**, *Uppsala University*, Uppsala.
Teaching and light administrative duties.

Papers

- 2018 **Coexistence of bounded and unbounded geometry for area-preserving maps**, *Joint with Denis Gaidashev*, submitted, preprint available.
- 2017 **On the invariant Cantor sets of period doubling type of infinitely renormalizable area-preserving maps**, *Commun. Math. Phys.* (2017), <https://doi.org/10.1007/s00220-017-3018-3>.

2016 **Non-Smooth Bifurcations of Uniformly Hyperbolic Invariant Manifolds in Skew Product Systems: Rigorous Results**, *joint with Jordi-Lluís Figueras*, accepted, preprint available.

Conferences

2019 **Workshop on validated numerics for dynamical systems and related topics**, *IMPA*, Rio de Janeiro.

Speaker

2017 **Workshop on New Frontiers in Complex Dynamics: From One to Several Variables**, *The Fields Institute*, Toronto.

Attendee

2017 **Llavefest: A broad perspective on finite and infinite dimensional Dynamical Systems**, *CRM*, Barcelona.

Attendee

2016 **New Trends in One-dimensional Dynamics**, *IMPA*, Rio de Janeiro.

Attendee

2016 **SCAN 2016**, Uppsala.

Attendee

2015 **School and Conference in Dynamical Systems**, *ICTP*, Trieste.

Attendee

Talks

2019 **Workshop on validated numerics for dynamical systems and related topics**, *IMPA*.

Coexistence of geometris in infinitely renormalizable area-preserving maps

2018 **Uppsala University-Tokyo Tech Symposium**, *Uppsala University*.

Renormalization in dynamical systems

2017 **PhD Seminar**, *Uppsala University*.

Complex Dynamics

2017 **PhD Seminar**, *Uppsala University*.

Chaos: Friend and foe

2017 **CAPA Seminar**, *Uppsala University*.

Invariant Cantor sets of infinitely renormalizable area-preserving maps

2016 **CAPA Seminar**, *Uppsala University*.

Non-smooth bifurcations in skew product systems at the anti-integrable limit

2016 **PhD Seminar**, *Uppsala University*.

Renormalization in dynamical systems

Teaching

Fall 2018 **Algebra and Geometry**, *Uppsala University*.

Problem sessions for two groups.

Fall 2017 **Fundamentals of Data Science**, *Uppsala University*.

Teaching assistant.

- Fall 2017 **Algebra I**, *Uppsala University*.
Main lecturer and problem sessions.
- Fall 2017 **Algebra and Geometry**, *Uppsala University*.
Substitute lecturer.
- Fall 2017 **Introduction to Data Science**, *Uppsala University*.
Teaching assistant.
- Spring 2017 **Single variable calculus**, *Uppsala University*.
Problem sessions.
- Fall 2016 **Algebra I**, *Uppsala University*.
Main lecturer and problem sessions.
- Fall 2015 **Algebra I**, *Uppsala University*.
Main lecturer and problem sessions.
- Spring 2015 **Linear Algebra II**, *Uppsala University*.
Problem sessions.
- Fall 2014 **Algebra I**, *Uppsala University*.
Problem sessions.
- Fall 2013 **Transform methods**, *Uppsala University*.
Problem sessions.
- Fall 2012 **Transform methods**, *Uppsala University*.
Problem sessions.

Languages

Swedish Fluent
English Fluent
French Basic

Mother tongue

Computer skills

General skills

- Rigorous numerics with interval arithmetic
- Machine Learning
- Apache Spark
- Apache Hadoop

Programming languages

- Haskell
- Python
- C++
- Scala
- SQL
- MATLAB

Miscellaneous

- HTML5 and CSS3
- \LaTeX
- Linux

Other experience

- Co-organizer and regular attendant of the Uppsala Big Data Meetup.
- PhD student representative on the board of the Department of Mathematics at Uppsala University, 2016-2017.
- Board member and secretary of Matematiska föreningen in Uppsala, 2016-2018.
- President of the student union of mathematics students, 2012-2013.