

## CURRICULUM VITAE

STEFANO MARSEGLIA

### PERSONAL INFORMATION

- Name: Stefano Marseglia
- Title: Ph.D in Mathematics, June 28, 2018. Stockholm University.
- Date of birth: October 5, 1989.
- Email: stefano.marseglia89@gmail.com
- Webpage: <https://stmar89.github.io/>
- Orcid: 0000-0003-1648-4938

### ACADEMIC POSITIONS

- 2024, 01 September – current - Marie Skłodowska-Curie Action Fellow, Laboratoire Jean Alexandre Dieudonné (LJAD), Université Côte Azur, Nice, France.
- 2024, 01 January – 2024, 31 August - Postdoc, Gaati Laboratory, University of French Polynesia, Tahiti, under the mentorship of Gaetan Bisson, MELODIA project.
- 2021, 01 January – 2023, 31 December - VENI Postdoc, Utrecht University, Mathematical Institute, Netherlands.
- 2020 (declined) – KAW Postdoc, 2 years at MIT followed by 2 years in Sweden (in a university of my choice).
- 2019, 01 January – 2020, 31 December - Postdoc, Utrecht University, Mathematical Institute, Netherlands, under the mentorship of Carel Faber.
- 2018, 01 September – 2018, 31 December - Visiting Scientist, Max Planck Institute for Mathematics, Bonn, Germany, under the mentorship of Gerd Faltings.
- 2018, 17 July – 2018, 31 December - Postdoc, Stockholm University, Department of Mathematics, Sweden, under the mentorship of Jonas Bergström (on leave while in Bonn).
- 2013, 16 August – 2018, 11 July - Ph.D student under the supervision of Jonas Bergström, Stockholm University, Department of Mathematics, Sweden.

### RESEARCH INTERESTS

Arithmetic Geometry and Number Theory, with focus on effective methods.  
More precisely, my main interests are:

- Abelian varieties (especially over finite fields).
- Orders in various kind of algebras (ideal classes, classification of modules).
- Arithmetic of  $GL_n(\mathbb{Z})$  and the conjugacy problem.

### MAJOR GRANTS

- 2023
  - 195 914.88 €: Marie Skłodowska-Curie Postdoctoral Fellowship - 2 year at the Université Côte d'Azur in Nice - MSCA-2023-PF-EF
- 2020
  - 250 000 €: Veni postdoctoral Scholarship - 3 years at Utrecht University - NWO (Dutch Research Council).
  - 130 000 USD: 2 years long Postdoc grant at MIT (plus funding for 2 extra years at any Swedish university of my choice) - K&A Wallenbergs Stiftelse - declined in favour of the Veni.
- 2018
  - 8 400 €: 4-month long Postdoc grant - Max Planck Institute for Mathematics in Bonn.

### PREVIOUS EDUCATION

- Ph.D in Mathematics, Stockholm University, Stockholm, Sweden, 28 June 2018.
- Licentiate in Mathematics, Stockholm University, Stockholm, Sweden, 2016.
- ALGANT Erasmus Mundus Master Programme (double degree), 2013:
  - Master of Mathematics, Università degli Studi di Padova, Italy, 2013.
  - Master of Science, Universiteit Leiden, the Netherlands, 2013.
- First Level Degree in Mathematics, Università degli Studi di Torino, 2011.

## REFERENCES

General

- 1)
  - Name: Jonas Bergström
  - Position: Associate Professor at Stockholm University
  - Role: Ph.D supervisor, coauthor, I have been his teaching assistant for several courses.
  - Email: [jonasb@math.su.se](mailto:jonasb@math.su.se)
  - Webpage: <https://www.su.se/profiles/jonab-1.190994>
- 2)
  - Name: Christophe Ritzenthaler
  - Position: Professor at University Rennes 1, and director of CIMPA
  - Role: opponent at my Ph.D defense, co-teacher at a CIMPA school, he attended a mini-grad-course I taught at Rennes University; Ritzenthaler is currently my Marie-Curie postdoc supervisor.
  - Email: [christophe.ritzenthaler@univ-rennes1.fr](mailto:christophe.ritzenthaler@univ-rennes1.fr)
  - Webpage: <https://perso.univ-rennes1.fr/christophe.ritzenthaler/>
- 3)
  - Name: John Voight
  - Position: Professor of Mathematics, University of Sydney
  - Role: Voight is very familiar with my research work; in particular, being the new head of development of the computer algebra system Magma, Voight can comment on the computational sides of my research.
  - Email: [jvoight@gmail.com](mailto:jvoight@gmail.com)
  - Webpage: <https://jvoight.github.io/>
- 4)
  - Name: Carel Faber
  - Position: Professor at Utrecht University
  - Role: postdoc advisor, I have been his teaching assistant for one Mastermath courses, he attended a mini-grad-course I taught at Utrecht University.
  - Email: [C.FFaber@uu.nl](mailto:C.FFaber@uu.nl)
  - Webpage: <https://www.staff.science.uu.nl/~faber010/>

Teaching

- 4)
  - Name: Barbara van den Berg
  - Position: Director of studies at the Mathematical Institute at Utrecht University (Opleidingsdirecteur bachelor Wiskunde en bestuurslid Onderwijs)
  - Email: [b.n.vandenberg@uu.nl](mailto:b.n.vandenberg@uu.nl)
  - Webpage: <https://www.uu.nl/medewerkers/BNvandenBerg>
- 5)
  - Name: Samuel Lundqvist
  - Director of studies in mathematics at Stockholm University (Studierektor i matematik)
  - Email: [samuel@math.su.se](mailto:samuel@math.su.se)
  - Webpage: <http://staff.math.su.se/samuel/>

## PUBLICATIONS

The numbering of papers and preprints is according to their first appearance on the arXiv.

- Preprints

- (18) Isogeny graphs of abelian varieties and singular ideals in orders  
with Sarah Arpin and Caleb Springer  
<https://arxiv.org/abs/2508.03570>
- (16) Labeling abelian varieties over finite fields  
with Edgar Costa, Taylor Dupuy, David Roe and Christelle Vincent  
<https://arxiv.org/abs/2501.17012>
- (15) Abelian varieties over finite fields with commutative endomorphism algebra: theory and algorithms  
with Jonas Bergström and Valentijn Karemaker  
<https://arxiv.org/abs/2409.08865>
- (14) Abelian surfaces over finite fields containing no curves of genus 3 or less  
with Elena Berardini and Alejandro Giangreco Maidana  
<https://arxiv.org/abs/2408.02493>

- Published and accepted articles

- (17) Weil polynomials of small degree  
to appear in *Indagationes Mathematicae*.  
<https://arxiv.org/abs/2505.24546>
- (13) Local isomorphism classes of fractional ideals of orders in étale algebras  
*Journal of Algebra* 673 (2025), 77-102.  
<https://doi.org/10.1016/j.jalgebra.2025.02.030>  
<http://arxiv.org/abs/2311.18571>
- (12) Abelian varieties over finite fields and their groups of rational points  
with Caleb Springer,  
*Algebra & Number Theory* 19 (2025), no. 3, 521–550.  
<https://doi.org/10.2140/ant.2025.19.521>  
<https://arxiv.org/abs/2211.15280>
- (11) Ideal classes of orders in quaternion algebras  
with Harry Smit and an Appendix by John Voight  
*Journal of Pure and Applied Algebra* 228 (2024), no. 7, 107649.  
<https://doi.org/10.1016/j.jpaa.2024.107649>  
<https://arxiv.org/abs/2211.13156>
- (10) Modules over orders, conjugacy classes of integral matrices, and abelian varieties over finite fields  
*Research in Number Theory* 11 (2025) no. 1, paper No. 27.  
Part of the proceedings of the Sixteenth Algorithmic Number Theory Symposium (ANTS XVI).  
<https://doi.org/10.1007/s40993-024-00584-9>  
<https://arxiv.org/abs/2208.05409>
- (9) Cohen-Macaulay type of orders, generators and ideal classes  
*Journal of Algebra* 658 (2024), 247-276.  
<https://doi.org/10.1016/j.jalgebra.2024.05.051>  
<https://arxiv.org/abs/2206.03758>
- (8) Every finite abelian group is the group of rational points of an ordinary abelian variety over  $\mathbb{F}_2$ ,  $\mathbb{F}_3$  and  $\mathbb{F}_5$   
with Caleb Springer,  
*Proceedings of the American Mathematical Society* 151 (2023), no. 2, 501-510.  
<https://doi.org/10.1090/proc/16127>  
<https://arxiv.org/abs/2105.08125>
- (7) Polarizations of abelian varieties over finite fields via canonical liftings  
with Jonas Bergström and Valentijn Karemaker,  
*International Mathematics Research Notices. IMRN* (2023), no.4, 3194-3248.  
<https://doi.org/10.1093/imrn/rnab333>  
<http://arxiv.org/abs/2101.05531>
- (6) Products and Polarizations of Super-Isolated Abelian Varieties  
with Travis Scholl,  
*Mathematische Zeitschrift* 300 (2022), no. 1, 445-462.  
<https://doi.org/10.1007/s00209-021-02791-x>  
<http://arxiv.org/abs/2008.05738>

- (5) Computing base extensions of ordinary abelian varieties over finite fields  
International Journal of Number Theory 18 (2022), no. 9, 1957-1974.  
<https://doi.org/10.1142/S1793042122501007>  
<http://arxiv.org/abs/2003.09977>
- (4) Computing abelian varieties over finite fields isogenous to a power  
Research in number theory 5 (2019) no. 4, paper no. 35.  
<https://doi.org/10.1007/s40993-019-0174-x>  
<https://arxiv.org/abs/1808.03673>
- (3) Computing square-free polarized abelian varieties over finite fields  
Mathematics of Computation 90 (2021), no. 328, 953-971.  
<https://doi.org/10.1090/mcom/3594>  
<https://arxiv.org/abs/1805.10223>
- (2) Computing the ideal class monoid of an order  
Journal of the London Mathematical Society 101 (2020), no. 3, 984-1007.  
<https://doi.org/10.1112/jlms.12294>  
<https://arxiv.org/abs/1805.09671>
- (1) Super-multiplicativity of ideal norms in number fields  
Acta Arithmetica 193 (2020), no. 1, 75-93.  
<https://doi.org/10.4064/aa181010-26-3>  
<https://arxiv.org/abs/1810.02238>

- Databases

- LMFDB: Isomorphism classes of abelian varieties over finite fields, with endomorphism rings and polarizations.  
<https://abvar.lmfdb.xyz/Variety/Abelian/Fq/>

- Computer packages

- Magma, over 11.000 lines of code:
  - \* AlgEt: Family=research; Audience=community; evolution=long term support; contribution=leader; Url=<https://github.com/stmar89/AlgEt>  
 It provides functionalities to compute with orders in étale algebras over  $\mathbb{Q}$ . In particular, one can compute isomorphism classes of modules and the monoid of the ideal classes of the fractional ideals of the order.
  - \* IdlClQuat: Family=research; Audience=community; evolution=long term support; contribution=leader; Url=<https://github.com/stmar89/IdlClQuat>  
 It computes the isomorphism classes of ideals of an order in a quaternion algebra. This is a collaboration with Harry Smit.
  - \* AbVarFq: Family=research; Audience=community; evolution=long term support; contribution=leader; Url=<https://github.com/stmar89/AbVarFq>  
 It provides functionalities to compute isomorphism classes and polarizations (in the ordinary case) for isogeny classes which are ordinary or over the prime field.
  - \* PolsAbVarFpCanLift: Family=research; Audience=community; evolution=long term support; contribution=leader; Url=<https://github.com/stmar89/PolsAbVarFpCanLift>  
 It contains code to compute polarizations for squarefree isogeny classes over a prime field even when they are not ordinary. It is an expansion of the package AbVarFq.
  - \* IsomClAbVarFqCommEndAlg: Family=research; Audience=community; evolution=long term support; contribution=leader; Url=<https://github.com/stmar89/IsomClAbVarFqCommEndAlg>  
 A package to compute (unpolarized) Fq-isomorphism classes of abelian varieties over Fq belonging to an isogeny class with commutative Fq-endomorphism ring, for any finite field Fq. In particular, the code works for any p-rank. It is an expansion of the package AbVarFq.
- Macaulay2 :
  - \* EllipticCurves : Family=research; Audience=community; evolution=no future; contribution=leader; Url=<https://macaulay2.com/doc/Macaulay2/share/doc/Macaulay2/EllipticCurves/html/index.html>  
 This Macaulay2 package provides basic functionalities for computations with elliptic curves. It was written in collaboration with Alessandro Oneto.

- Monographs

- Marseglia, S. (2018, defended on June 8). Computing abelian varieties over finite fields  
*Ph.D Thesis, Stockholm University*, under the supervision of Jonas Bergström.
- Marseglia, S. (2016). Isomorphism classes of abelian varieties over finite fields  
*Licentiate Thesis, Stockholm University*, under the supervision of Jonas Bergström.

- Marseglia, S. (2013). Super-multiplicativity of ideal norms in number fields  
*Master Thesis, Universiteit Leiden*, under the supervision of Bart de Smit.

## TEACHING

Reverse chronological order in each section. Conducted in English, unless otherwise specified.

UU=at Utrecht University. SU=at Stockholm University.

- Complete courses: Lecturer, Examiner, Grading
  - *Group theory*, Bachelor course (intensive format), 2019/20, University College Utrecht.
  - *Mathematics of cryptography*, Bachelor course, (formal examiner: Jonas Bergström; the class could be taken by first-year master students as well), 2017/18, SU.
- Theses Supervision
  - Master Thesis: Jun Jie Lin, *Isogeny Classes of Abelian Varieties over Finite Fields*, 2022/23, UU.
  - Master Thesis: Noah Keupers, *A partial solution to the similarity extension problem*, 2021/22, UU.
  - Bachelor Thesis: Arjan de Boer, *Covering modules by proper submodules*, 2021/22, UU.
  - Bachelor Thesis: Jun Jie Lin, *Integer Factorization using Elliptic Curves*, 2020/21, UU.
  - Bachelor Thesis: Ward Jousma, *Elliptic curves: an introduction and their group structure over  $\mathbb{Z}/N\mathbb{Z}$* , 2020/21, UU.
- Other lecturer activities, group supervision, second reader, etc.
  - Lecturer, *Elliptic Curves Over Finite Fields*, 1-day-class, 2023, Utrecht Summer School.
  - one computational class, *Introduction to Algebraic Varieties*, Bachelor course taught by Marta Pieropan, 2021/22 and 2022/23, UU.
  - U-Talent thesis, for a group of 3 high school students, 2022/23, UU.
  - Group Supervisor, *Communicatie in wiskunde*, Bachelor course, partly in Dutch, 2021/22, UU.
  - Second Reader Master Thesis : Anne Wouda, *Supersingular Isogeny Graphs and Orientations in Cryptography*, 2021/22, UU.
  - Second Reader Master Thesis : Mieke Wessel, *Notting but structure*, 2021/22, UU.
  - Group Supervisor, *Orientation in Mathematical Research*, Master course, 2021/22, UU.
  - Group Supervisor, *Communicatie in wiskunde*, Bachelor course, partly in Dutch, 2020/21, UU.
  - Group Supervisor, *Orientation in Mathematical Research*, Master course, 2020/21, UU.
  - Group Supervisor, *Orientation in Mathematical Research*, Master course, 2019/20, UU.
  - Lecturer, *Elliptic Curves Over Finite Fields*, 1-day-class, 2019, Utrecht Summer School.
- Lecturer in grad courses/schools
  - leader of the working group on “Abelian varieties over finite fields and their isogeny classes”, at the CIMP school “Effective Algebra and the LMFDB”, at Makerere University, Uganda, Jan 13 - 24, 2025.
  - 8 hours of online lectures, *Ideal class monoid and computing abelian varieties over finite fields*, part of the CIMP School *Modern Tools for Rational Points on Curves over Finite Fields*, with Anna Somoza Henares and Christophe Ritzenthaler, 2021.
  - 1 hour of online lecture, ANTS Summer School - European session, part of ANTS-XIV conference,  *$\mathbb{Z}$ -conjugacy classes of matrices and fractional ideals*, 2020.
  - 8 hours of lectures, *Ideal classes and abelian varieties over finite fields*, 2019, UU.
  - 8 hours of lectures, *Ideal classes and abelian varieties over finite fields*, 2018, Rennes University.
- Teaching Assistant
  - Exercise sessions and Grading, *Algebraic Geometry 2*, Mastermath, lecturers Carel Faber and Robin de Jong, 2019/20, UU.
  - Exercise sessions and Grading, *Mathematics of cryptography*, lecturer Wushi Goldring, 2016/17, SU.
  - Exercise sessions and Grading, *Commutative Algebra & Algebraic Geometry*, lecturers Jonas Bergström and David Rydh, 2016/17, SU.
  - Grading, *Abstract Algebra*, lecturer Wushi Goldring, 2016/17, SU.
  - Exercise sessions and Grading, *Mathematics of cryptography*, lecturer Jonas Bergström, 2015/16, SU.
  - Exercise sessions and Grading, *Mathematics of cryptography*, lecturer Karl Røkaeus, 2014/15, SU.
  - Exercise sessions and Grading, *Mathematics of cryptography*, lecturer Jonas Bergström, 2013/14, SU.
  - Tutoring (Handledning), *Matematik I*, in Swedish, 6 semesters between 2014 and 2017, SU.
  - Coordinator for the Tutoring for *Matematik I*, 3 semesters between 2016 and 2017, SU.
  - Tutoring (Handledning), *Lilla Bibliotek*, in Swedish, 4 semesters between 2014 and 2016, SU.
- Qualifications
  - I have attended a Course in Pedagogy by Prof. Tony Burden at Stockholm University.

## REFeree ACTIVITIES

- Complete reviews:
  - Mathematische Annalen
  - Experimental Mathematics
  - Mathematical Communications
  - International Journal of Number Theory
  - Mathematics of Computation
  - Research In Number Theory
  - ANTS : Algorithmic Number Theory Symposium
  - Journal of the European Mathematical Society
  - Proceedings of the American Mathematical Society
- Quick reviews:
  - Algebra and Number Theory
  - Research In Number Theory

## SERVICES, ORGANIZATION AND OTHER ACTIVITIES

- at Université Côte d’Azur
  - Co-organizer of the workshop in Computational Number Theory part of the Foundations of Computational Mathematics Conference - Vienna, Austria - 13-15 July 2026.
  - Co-organizer of the workshop “Curves and abelian varieties in Magma: moduli and invariants” - FRUMAM, Marseille, France - June 6-7, 2025.
- at Utrecht University
  - Organizer of the AG Seminar, February - November 2023.
  - Member of the selection committee for a postdoc for Marta Pieropan, January 2023.
  - Workshop for Ph.D students: how to use git, vim, and ssh into a server, Spring 2022, together with Leandro Chiarini Medeiros.
  - Tutorial for Ph.D students and faculty: how to access a server and use Magma, Fall 2021.
  - Contribution to the  $\mu$ -games (math and programming competition for students), Fall 2021.
  - Panelist for VENI/Rubicon/MSCA-IF Life Sciences discussion, June 29, 2021.
  - Member of the selection committee for a Ph.D student for Valentijn Karemaker, January 2020.
- at Stockholm University
  - Mini-Conference for Ph.D students in Mathematics (from Swedish Universities), May 22-23 2017.
  - Co-organizer of the Math-Ph.D seminar (2016-2018).
  - Secretary of the Ph.D council at the Math Department (2015-2018).

## TALKS

- Invited
  - “Classifying abelian varieties over finite fields with commutative endomorphism algebra” plenary speaker, part of the itinerant seminar CAIPI, LORIA Nancy, France, April 7-8, 2025.
  - “Cohen-Macaulay type of endomorphism rings of abelian varieties over finite fields” Universität Bielefeld, Germany. July 02, 2024.
  - “Cohen-Macaulay type of endomorphism rings of abelian varieties over finite fields” Oberseminar, Universität Duisburg-Essen, Germany. May, 23, 2024.
  - “Computing isomorphism classes and polarisations of abelian varieties over finite fields” Institut Fourier, Grenoble, France. December 12, 2023.
  - “Local isomorphism classes of fractional ideals in étale algebras” AGNT Seminar, Leiden, Netherlands. November 29, 2023.
  - “Computing isomorphism classes and polarisations of abelian varieties over finite fields” CANARI Seminar, Bordeaux, France. November 14, 2023.
  - “Abelian varieties over finite fields” Alcant Alumni Network Symposium (SYMPAAN), Abbaye de St Jacut de La Mer, France. October 5, 2023.
  - “Cohen-Macaulay type of endomorphism rings of abelian varieties over finite fields” Number Theory Seminar, MIT, USA. May 16, 2023.
  - “Cohen-Macaulay type of endomorphism rings of abelian varieties over finite fields” Algebra Seminar, University of Groningen, Netherlands. February 7, 2023.
  - “Polarizations of abelian varieties over finite fields via canonical liftings” KIAS Number Theory Seminar (online), Seoul, Republic of Korea. May 12, 2022.

- “Polarizations of abelian varieties over finite fields via canonical liftings”  
Utrecht Geometry Center Seminar, Utrecht University, Netherlands. March 29, 2022.
- “Computing Isomorphism Classes of Abelian Varieties over Finite Fields”  
VaNTAGe 11th series: Curves and abelian varieties over finite fields, (online). Feb 1, 2022.
- “Computing Isomorphism Classes of Abelian Varieties over Finite Fields”  
Semi-Plenary Talk: Curves over finite fields - past, present and future (online). May 24, 2021.
- “Polarizations of abelian varieties over finite fields via canonical liftings”  
Wednesday Zoom (online), Stockholm University, Stockholm, Sweden. April 21, 2021.
- “Products and Polarizations of Super-Isolated Abelian Varieties”  
(Q)NTAG (online), Simon Fraser University, Burnaby, Canada. December 03, 2020.
- “Isomorphism classes of abelian varieties over finite fields”  
Number Theory Seminar, SU and KTH, Stockholm, Sweden. March 03, 2020.
- “Abelian varieties over finite fields isogenous to a power”  
Utrecht Geometry Center Seminar, Utrecht University, Netherlands. April 04, 2019.
- “Abelian varieties over finite fields isogenous to a power”  
Seminar: Institut de recherche mathématique Avancée, Université de Strasbourg, France. December 06, 2018.
- “Abelian varieties over finite fields isogenous to a power”  
Seminar: Institut de recherche mathématique de Rennes IRMAR, Rennes, France. November 16, 2018.
- “Computing isomorphism classes of abelian varieties over finite fields”  
Oberseminar: Max Planck Institute for Mathematics, Bonn. October 11, 2018.
- “Computing isomorphism classes of abelian varieties over finite fields”  
Number Theory Seminar, SU and KTH, Stockholm, Sweden. May 02, 2018.
- “Computing isomorphism classes of abelian varieties over finite fields”  
AGC<sup>2</sup>T 2017, CIRM, Luminy, France. June 21, 2017.
- Contributed and other
  - “Abelian varieties over finite fields in the LMFDB”  
Software Demo: LMFDB, Computation, and Number Theory (LuCaNT), ICERM, Providence, USA. July 8, 2025.
  - “Modules orders, conjugacy classes of integral matrices, and abelian varieties over finite fields”  
Sixteenth Algorithmic Number Theory Symposium ANTS-XVI, MIT, Cambridge, USA. July 18, 2024.
  - “Abelian varieties over finite fields”  
Gaati Lab, University of French Polynesia. February 14, 2024.
  - “Cohen-Macaulay type of endomorphism rings of abelian varieties over finite fields”  
AGC<sup>2</sup>T 2023, CIRM, Luminy, France. June 6, 2023.
  - “Cohen-Macaulay type of endomorphism rings of abelian varieties over finite fields”  
AG Seminar, Utrecht University, Netherlands. March 1, 2023.
  - “Every finite abelian group is the group of rational points of an ordinary abelian variety over  $\mathbb{F}_2$ ,  $\mathbb{F}_3$  and  $\mathbb{F}_5$ ”  
Contributed talk: DIAMANT Symposium, Utrecht, Netherlands. April 21, 2022.
  - “Polarizations of abelian varieties over finite fields via canonical liftings”  
Contributed Talk: AGCCT 2021 (online), CIRM, Luminy, France. June 1, 2021.
  - “Representing abelian varieties”  
Welcome Home 2019, Università degli Studi di Torino, Turin, Italy. December 19, 2019.
  - “Isomorphism classes of abelian varieties over finite fields”  
Contributed talk: DIAMANT Symposium, De Bilt, Netherlands. November 28, 2019.
  - “Computing Abelian varieties over finite fields”  
Lightning Talk: Arithmetic of Low-Dimensional Abelian Varieties, ICERM, Providence, USA. June 04, 2019.
  - “Isomorphism classes of abelian varieties over finite fields”  
Contributed talk: Canadian Number Theory Association XV, Université Laval, Canada. July 12, 2018.
  - Ph.D thesis presentation  
Stockholm University, Sweden. June 08, 2018.
  - “Isomorphism classes of abelian varieties over finite fields”  
Contributed talk: The 4th meeting of the Roman Number Theory Symposium, Rome, Italy. April 18, 2018.
  - “Introduction to modular forms”  
SMC Pre-colloquium for Gerard van der Geer, AlbaNova, Stockholm, Sweden. September 27, 2017.
  - “The ideal class monoid of an order in a number field”  
Welcome Home 2016, Università degli Studi di Torino, Turin, Italy. December 21, 2016.
  - “Isomorphism classes of abelian varieties over finite fields.”  
Contributed talk: PIMS Summer School in Explicit Methods for Abelian Varieties.  
University of Calgary, Canada. June 18, 2016.

- Licentiate thesis presentation  
Stockholm University, Sweden. June 13, 2016.
- “Ideal class monoid of an order in number fields”  
Contributed talk: Stockholm-Uppsala Mini-Conference.  
Stockholm University, Sweden. May 12, 2016.
- “Introduction to category theory”  
SMC Pre-colloquium for Volodymyr Mazorchuk, AlbaNova, Stockholm, Sweden. March 9, 2016.
- “Isomorphism classes of (principally polarized) abelian varieties over finite fields”  
Welcome Home 2015 , Università degli Studi di Torino, Turin, Italy. December 22, 2015.

#### WORKSHOPS AND VISITS

- Short Visit, MIT, USA, June 30 - July 4, 2025.
- Workshop: "Curves and abelian varieties in Magma: moduli and invariants", FRUMAM, Marseille, June 6-7, 2025.
- Short Visit, Stockholm University, Sweden, December 3-10, 2024.
- Workshop, Université de Neuchâtel, Switzerland, September 30 - October 2, 2024.
- Short Visit, Stockholm University, Sweden, June 2-7, 2024.
- Short Visit, Université de Bordeaux, France, November 13-17, 2023.
- Long Visit, MIT, USA, May 4-31, 2023.
- Short Visit, University College London, United Kingdom, November 15-22, 2022.
- Short Visit, Stockholm University, Sweden, May 28-June 5, 2022.
- Short Visit, Max Planck Institute for Mathematics in Bonn, Germany, May 15-20, 2022.
- Short Visit, Stockholm University, Sweden, November 27-December 3, 2021.
- Short Visit, Stockholm University, Sweden, March 2-13, 2020.
- Short Visit, Stockholm University, Sweden, June 8-12, 2019.
- Workshop: “Isomorphism classes of abelian varieties on the LMFDB”, University of Vermont, USA, May 6-11, 2019.
- Short Visit, MIT, USA, May 1-5, 2019.
- Workshop: “Abelian varieties over finite fields”, ICERM, Providence RI, USA, Jan 31-Feb 3, 2019.
- Short Visit, University of Rennes, France, November 12-16, 2018.

#### CONFERENCES ATTENDED

- LMFDB, Computation, and Number Theory (LuCaNT) 2025 - ICERM, Providence, USA, July 7-11, 2025.
- AGC<sup>2</sup>T 2023: Arithmetic, Geometry, Cryptography and Coding Theory, CIRM, Luminy, France, June 9-13, 2025.
- CAIPI, Centre Inria de l'Université de Lorraine, Nancy, France, April 7-8, 2025.
- $\mathbb{N}^3$  Days XXVI - Kiel University, Germany, November 28-30, 2024.
- ANTS XVI, Algorithmic Number Theory Symposium , MIT, Cambridge, USA, July 15-19, 2024.
- CAVARET, Curves, Abelian Varieties and Related Topics, Barcelona, Spain, June 7-21, 2024.
- DIAMANT Symposium, Eindhoven, Netherlands, November 23-24, 2023.
- Algant Alumni Network Symposium (SYMPAAN), Abbaye de St Jacut de La Mer, France, October 2-6, 2023.
- AGC<sup>2</sup>T 2023: Arithmetic, Geometry, Cryptography and Coding Theory, CIRM, Luminy, France, June 5-9, 2023.
- DIAMANT Symposium, Utrecht, Netherlands, April 13, 2023.
- DIAMANT Symposium, Leiden, Netherlands, November 24-25, 2022.
- ANTS XV, Algorithmic Number Theory Symposium, University of Bristol, August 8 - 12, 2022.
- Carel Faber's 60th Birthday Conference, Institute Mittag-Leffler, Djursholm, Sweden, June 2-3, 2022.
- DIAMANT Symposium, Utrecht, Netherlands, April 21-22, 2022.
- DIAMANT Symposium, Utrecht, Netherlands, November 25-26, 2021.
- DIAMANT Symposium (online), April 7-8, 2021.
- AGC<sup>2</sup>T 2021 (online), CIRM, Luminy, France, May 24-28, 2021.
- Curves Over Finite Fields : past, present and future (online), May 24-28, 2021.
- DIAMANT Symposium (online), November 26-27, 2020.
- DIAMANT Symposium, De Bilt, Netherlands, November 28-29, 2019.
- CMI-HIMR Summer School In Computational Number Theory, University of Bristol, UK, June 17-28, 2019.
- Arithmetic of Low-Dimensional Abelian Varieties, ICERM, Providence RI, USA, June 3-7, 2019.
- Curves and groups in families, Rennes, France, May 13-17, 2019.
- ANTS XIII, Algorithmic Number Theory Symposium, University of Wisconsin, Madison, July 16-20, 2018.
- CNTA XV, Canadian Number Theory Association Conference. University of Laval, Quebec city, July 9-13, 2018.
- $\mathbb{N}^3$  Days VIII /  $\mathbb{N}^3$  week, Mittag-Leffler Institute, June 25-29, 2018.
- $\mathbb{N}^3$  Days VII University of Stockholm and KTH, Sweden, October 20-21, 2017.
- Master Class in Tropical Geometry, Stockholm University, Sweden, August 14-25 2017.



- Workshop on curves of low genus, Univ. Politècnica de Catalunya, Barcelona, July 13-15 2017.
- FoCM 2017: Foundations of Computational Mathematics, University of Barcelona, July 10th-12th, 2017.
- AGC<sup>2</sup>T 2017: Arithmetic, Geometry, Cryptography and Coding Theory, CIRM, Luminy, June 19-23, 2017.
- $\mathbb{N}^3$  Days VI University of Copenhagen, Denmark, June 2-3 2017.
- Mini-Conference for Ph.D-Students in Mathematics, University of Stockholm, May 22-23 2017.
- Arizona Winter School 2017: Perfectoid Spaces, University of Arizona in Tucson, AZ, March 11-15, 2017.
- CNTA XV, Canadian Number Theory Association Conference, University of Calgary, Calgary, Alberta, June 20-24, 2016.
- Summer School in Explicit Methods for Abelian Varieties, University of Calgary, Calgary, Alberta, June 16-18, 2016.
- Stockholm-Uppsala Mini-Conference for Ph.D-Students in Mathematics, University of Stockholm. May 12-13 2016.
- 27th Nordic Congress of Mathematicians, Stockholm University, Stockholm, Sweden, March 16-20, 2016.
- 2015 Summer Research Institute on Algebraic Geometry, University of Utah, Salt Lake City, Utah, July 13-31, 2015.
- Graduate Workshop on Moduli of Curves Simons Center, Stonybrook University, USA, July 7-18, 2014.
- Nordfjordeid Summer school 2014. Toric degenerations and mirror symmetry, Nordfjordeid, Norway, June 16-20, 2014.
- CIMPA/TÜBITAK/GSU Summer School Algebraic Geometry and Number Theory, Galatasaray University, Istanbul, Turkey, June 2-13, 2014.

## OTHER GRANTS

- 2018
  - 2 800 € (28600 SEK) - Travelling grant - The Royal Swedish Academy of Sciences, Magnusson Fund.
- 2017
  - 500 € (5000 SEK) - Travelling grant - The Royal Swedish Academy of Sciences, Magnusson Fund.
  - 450 € (4500 SEK) - Travelling grant - Liljevalch resestipendier.
  - 1000 € (10000 SEK) - Grant (used to buy a laptop) - John Söderbergs and L&E Kinanders Fund.
  - 400 € (4000 SEK) - Travelling grant - K&A Wallenbergs Stiftelses resefond.
- 2016
  - 1400 € (14000 SEK) - Travelling grant - K&A Wallenberg Jubileumsdonation.
- 2015
  - 1500 € (15000 SEK) - Travelling grant - The Royal Swedish Academy of Sciences, Magnusson Fund.
- 2014
  - 1000 € (10000 SEK) - Travelling grant - The Royal Swedish Academy of Sciences, Magnusson Fund.

## LANGUAGES

- Italian, native.
- English, fluent.
- French, beginner.
- Dutch, fair (B2 level - in 2022).
- Swedish, medium/advanced.