Anna SOMOZA HENARES

Eindhoven, The Netherlands

+34 626 375 635

anna.somoza.henares@gmail.com

ACADEMIC POSITIONS

FEB. 20–MAY 22	**Postdoctoral researcher**,	IRMAR, Université de Rennes 1, Rennes, France
NOV. 19–FEB. 20	**Postdoctoral researcher**,	Institut de Matemàtiques de la Universitat de Barcelona, Barcelona, Spain
SEP. 18–APR. 19	**Visiting researcher**,	Max Planck Institute for Mathematics, Bonn, Germany

EDUCATION

2019 **PhD** in Mathematics, Universiteit Leiden, Leiden, The Netherlands.

PhD in Applied Mathematics – Cum laude, Universitat Politècnica de Catalunya, Barcelona, Spain.

PhD thesis: Inverse Jacobian and related topics for certain superelliptic curves (supervised by Joan-Carles Lario and Marco Streng) 28th March 2019.

2014 **Master** in Advanced Mathematics and Mathematical Engineering, Universitat Politècnica de Catalunya, Barcelona, Spain.

2013 **Bachelor** of Mathematics, Universitat Politècnica de Catalunya, Barcelona, Spain.

PUBLICATIONS AND PREPRINTS

[1] J-C. Lario, A. Somoza, C. Vinvent. *An inverse Jacobian algorithm for Picard curves* (Apr. 2020) Res. number theory 7, 32 (2021).

[2] I. Bouw, N. Coppola, P. Kılıçer, S. Kunzweiler, E. Lorenzo García, A. Somoza. *Reduction types of genus-3 curves in a special stratum of their moduli space* (Mar. 2020). In *Women in Numbers Europe III*, edited by A.C. Cojocaru, S. Ionica and E. Lorenzo-García, Association for Women in Mathematics Series, vol. 24. Springer.

[3] N. Anbar, A. Odzak, V. Patel, L. Quoos, A. Somoza, A. Topuzoğlu. *On the Carlitz Rank of permutation polynomials over finite fields: recent developments*, (Apr. 2017.) In *Women in Numbers Europe 2: Research Directions in Number Theory*, edited by I. Bouw, R. Newton and E. Özman, Association for Women in Mathematics Series, vol. 11, Springer.

[4] N. Anbar, A. Odzak, V. Patel, L. Quoos, A. Somoza, A. Topuzoğlu. *On the difference between permutation polynomials* (Mar. 2017). Finite Fields and Their Applications, 49, pp. 132 - 142, 2018.

[5] J-C. Lario, A. Somoza. *The Sato-Tate conjecture for a Picard curve with Complex Multiplication* (Oct. 2014). Number Theory Related to Modular Curves, Momose Memorial Volume, pp. 151 - 166, AMS Contemporary Mathematics.

TALKS

OCT. 2020	The Inverse Jacobian problem (online) Séminaire arithmétique et theorie de l'information, Marseille, France.
OCT. 2020	Reduction types of Ciani quartics (online) Groningen algebra group seminar, Groningen, The Netherlands.
MAR. 2020	The Inverse Jacobian problem IRMAR, Université de Rennes 1, Rennes, France.
FEB. 2020	Reduction type of genus-3 curves in special strata of their moduli space STNB 2020, Universitat de Barcelona, Barcelona, Spain.
DEC. 2019	The Inverse Jacobian problem for certain superelliptic curves University of Vermont, Burlington, VT, USA.
NOV. 2019	The Inverse Jacobian problem Utrecht Geometry Center Seminar, Utrecht, Netherlands.
JULY 2019	Inverse Jacobian problem for cyclic plane quintic curves SIAM Conference on Applied Algebraic Geometry, Bern, Switzerland.
MAY 2018	Reconstruction of cyclic plane quintic curves (Invited talk) Linfoot seminar, Bristol, United Kingdom.
APR. 2018	From the difference of permutation polynomials to the construction of algebraic curves with Complex Multiplication (Invited talk) Workshop on Finite Fields, Function Fields and Their Applications, Istanbul, Turkey.
FEB. 2018	Reconstruction of cyclic plane quintic curves (Invited talk) Workshop on Numerical methods for algebraic curves, Rennes, France.
SEP. 2017	Construction of Picard curves with complex multiplication IV Congreso de Jóvenes Investigadores de la RSME, Valencia, Spain.
JULY 2017	Construction of Picard curves Workshop on curves of low genus, Barcelona, Spain.
JUNE 2017	Construction of Picard curves with complex multiplication Meeting of the Catalan, Spanish, Swedish Math Societies, Umeå, Sweden.
JUNE 2017	Construction of Picard curves Algebra and Number Theory Seminar, Universiteit Leiden, Leiden, Netherlands
JUNE 2017	Construction of Picard curves with complex multiplication DIAMANT Symposium Spring 2017, Breukelen, Netherlands.

Sep. 2016	On permutation polynomials WINE2, Lorentz Center, Leiden, Netherlands.
Feb. 2016	Arithmetic on CM Picard curves STNB 2016, Universitat de Barcelona, Barcelona, Spain.

Workshops and congresses attended

Feb. 2022	Barcelona Number Theory Seminar 2022 (STNB22) – Theme coordinator Universitat de Barcelona, Barcelona, Spain.
Sep. 2021	Women in Sage – Group leader AIMS Senegal, Mbour, Senegal.
May 2021	AGC^2T-18 (online) CIRM, Marseille, France.
Jul. 2020	ANTS 2020 (online) University of Auckland, New Zealand.
Jun. 2020	ANTS Summer School 2020 (online) – Organizer University of Auckland, New Zealand
Feb. 2020	Barcelona Number Theory Seminar 2020 (STNB20) Universitat de Barcelona, Barcelona, Spain.
Sep. 2019	Women in Numbers Europe - 3 Université de Rennes 1, Rennes, France.
July 2019	SIAM Conference on Applied Algebraic Geometry University of Bern, Bern, Switzerland.
May 2019	School – Curves and groups in families Université de Rennes 1, Rennes, France.
Apr. 2019	Sage days 98 - Women in Sage Crete, Greece.
Jan. 2019	Barcelona Number Theory Seminar 2019 (STNB19) Universitat de Barcelona, Barcelona, Spain.
Apr. 2018	Workshop on Finite Fields, Function Fields and Their Applications Sabanci Universitesi, Istanbul, Turkey.
Feb. 2018	Workshop on Numerical methods for algebraic curves Université de Rennes 1, Rennes, France.
Feb. 2017	DIAMANT Symposium Fall 2017 Breukelen, Netherlands.
Sep. 2017	IV Congreso de Jóvenes Investigadores de la RSME Universitat de Valencia, Valencia, Spain.
July 2017	Workshop on curves of low genus Universitat de Barcelona, Barcelona, Spain.
July 2017	Foundations of Computational Mathematics 2017 Universitat Politècnica de Catalunya, Barcelona, Spain.
June 2017	Workshop on Arithmetic and Computation KU Leuven, Leuven, Belgium.
June 2017	Meeting of the Catalan, Spanish, Swedish Math Societies Linköping University, Umeå, Sweden.

June 2017	DIAMANT Symposium Spring 2017 Breukelen, Netherlands.
Jan. 2017	Barcelona Number Theory Seminar 2017 (STNB17) Universitat de Barcelona, Barcelona, Spain.
Jan. 2017	Sage days 82 - Women in Sage Paris, France.
Sep. 2016	Women in Numbers Europe - 2 Lorentz Center, Leiden, Netherlands.
March 2016	Arizona Winter School 2016 Analytic Methods in Arithmetic Geometry University of Arizona, Tucson, AZ, USA.
Feb. 2016	Barcelona Number Theory Seminar 2016 (STNB16) Universitat de Barcelona, Barcelona, Spain.
July 2014	CMI Summer School 2014 Periods and Motives: Feynman amplitudes in the 21st century ICMAT, Madrid, Spain.
June 2014	Summer Mathematics School 2014 Counting arithmetic objects CRM, Montréal, Canada.
Feb. 2014	Winter school 2014 Frobenius distribution on curves CIRM, Marseille, France.

Computer skills

Basic	R, Matlab, Mathematica, Maple
Intermediate	C++, Magma
Advanced	SageMath, Python

Languages

Spanish	Mothertongue
Catalan	Mothertongue
English	Fluent
French	Fluent

Teaching experience

Fall 2020	Lecturer for the course *Euclidean lattices and cryptography*, M2 Crypto, Université de Rennes 1, Rennes, France.
Spring 2018	Teaching assistant for the course *Elliptic curves*, Mastermath program, the Netherlands.

FALL 2016	Teaching assistant for the course *Mathematics foundations*, first-year course of the Bachelor of Computer Science, *Universitat Politècnica de Catalunya*, Barcelona, Spain.
2014-JAN. 2016	Teacher at an academy for univesity students, in charge of teaching and organizing several mathematics courses, *Academia Sol*, Barcelona, Spain.
SPRING 2012	Teaching assistant for the course *Geometria Afí i Euclidiana* (Euclidean and affine geometry), first-year course of the Bachelor of Mathematics, *Universitat Politècnica de Catalunya*, Barcelona, Spain.
FALL 2011	Teaching assistant for the course *Càlcul en una variable* (One-variable calculus), first-year course of the Bachelor of Mathematics, *Universitat Politècnica de Catalunya*, Barcelona, Spain.