

Álvaro González Hernández

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Education

2021 – present	PhD in Mathematics – University of Warwick. <ul style="list-style-type: none">➤ Supervised by Prof. Gavin Brown and Dr. Damiano Testa.➤ Research area: K3 surfaces and their arithmetic, singularities and flops in positive characteristic, and desingularised models of Kummer varieties.
2020 – 2021	MSc in Mathematical Sciences – University of Oxford. <ul style="list-style-type: none">➤ Classification: Distinction.➤ Dissertation on the topic of <i>Local fields and the Hasse principle</i> under the supervision of Prof. Victor Flynn.
2016 – 2020	BSc in Mathematics – Universidad de Salamanca (Spain). <ul style="list-style-type: none">➤ Average grade of the degree: 9.56/10.➤ Final thesis titled <i>Continued fractions</i> under the direction of Prof. Luis M. Navas Vicente. Grade: 100% with <i>Honours</i>.➤ Extraordinary Prize of Degree, for having the best academic record in Mathematics.➤ <i>Honours</i> in 18 courses (for grades over 90% and being in the top 5% of the class).
2018 – 2019	Visiting student as part of the Erasmus programme – University of Edinburgh. <ul style="list-style-type: none">➤ First class honours awarded in all the courses taken.

Teaching Experience

2021 – present	Graduate Teaching Assistant at the University of Warwick <ul style="list-style-type: none">➤ Assisted on the teaching of the courses MA2K3 Consolidation (2021 – 2022), MA3D5 Galois Theory (2021 – 2022), MA243 Geometry (2022 – 2023), MA249 Groups and Rings (2022 – 2023), MA448 Hyperbolic Geometry (2022 – 2023) and MA397 Consolidation (2023 – 2024).➤ Supervised a group of first-year students on the courses MA106 Linear Algebra, MA131 Analysis, MA133 Differential Equations, MA134 Geometry and Motion, and MA136 Introduction to Abstract Algebra (2021 – 2022).➤ Participated in the marking of the modules MA131 Analysis (2022), MA134 Geometry and Motion (2022), MA3D5 Galois Theory (2022, 2023) and MA249 Groups and Rings (2023).
2016 – 2020	Private Tutor <ul style="list-style-type: none">➤ Taught private lessons on the university courses Linear Algebra I and II (2016 – 2017), Technical Drawing (2017 – 2018) and Topology (2017 – 2018).➤ Prepared students for the Mathematics exam of the University Access Test (2019 – 2020).

Research Internships

2021	Internship of two months in the Institute of Mathematics of the Universidad de Sevilla (IMUS). <ul style="list-style-type: none">➤ Researched on Picard-Fuchs equations in families of varieties, under the supervision of Dr. Alberto Castaño Domínguez.
2019	Internship of two months in the Institute of Mathematical Sciences (ICMAT). <ul style="list-style-type: none">➤ Researched on the topics of nonlinear dispersive equations and inverse scattering theory under the supervision of Prof. Alberto Enciso.

Languages

Spanish	Native.
English	Proficient (level C2).
French	Intermediate (level B2).

Work Experience and Volunteering

2022 – present	Organiser of seminars and study groups. <ul style="list-style-type: none">➤ Organised Warwick’s Junior Number Theory Seminar (2023 – present).➤ Organised Warwick’s Postgraduate Seminar (2022 – 2023).➤ Organised a study group on Hasse-Weil zeta functions (2022).
2020 – present	Member of the youth committee of the Royal Spanish Mathematical Society. <ul style="list-style-type: none">➤ Wrote articles for the weekly bulletin of the society.➤ Worked on reports about the challenges that young mathematicians face in Spain.
2016 – 2023	Participation in student representation activities. <ul style="list-style-type: none">➤ Chair of the Mathematics Staff-Graduate Student Liaison Committee of the University of Warwick (2022 – 2023).➤ Member of the Consultative Committee for Graduates of the Mathematical Institute in Oxford and Student Union representative and social activities assistant of the Middle Common Room of St Peter’s College (2020 – 2021).➤ Student representative of my cohort and member of the Teaching Committee and the Final Thesis Committee at the Universidad de Salamanca (2016 – 2020).
2022 – 2023	Local organiser of the XXX edition of the conference GAeL (Géométrie Algébrique en Liberté).
2019 – 2023	Editorial board member of the student journal <i>TEMat</i>. <ul style="list-style-type: none">➤ Edited articles and searched for reviewers.
2021	Micro-internship as an outreach content developer in Tom Rocks Maths. <ul style="list-style-type: none">➤ Worked on the production of a video centred around mathematical content.
2018 – 2020	Spokesperson of the Publications Committee and member of the Equality Committee of the National Association of Mathematics Students (ANEM). <ul style="list-style-type: none">➤ Led the team that redacted the association’s publications and edited their bulletin and newsletter.➤ Contributed in activities for the visibility of women and LGBTQ+ people in the mathematical community.

Research Talks

March, 2023	“Masses of central leaves and automorphisms of Abelian varieties.” <ul style="list-style-type: none">➤ Arizona Winter School
February, 2023	“How to desingularise Kummer surfaces. ” <ul style="list-style-type: none">➤ Junior Geometry Seminar. King’s College London / University College London.
February, 2023	“Explicit theory of Kummer surfaces in characteristic two. ” <ul style="list-style-type: none">➤ Hodge Club. University of Edinburgh.
January, 2023	“Local normal forms of non-commutative potentials.” <ul style="list-style-type: none">➤ RGAS School. Universidad de Sevilla.
October, 2023	“Explicit theory of Kummer surfaces in characteristic two.” <ul style="list-style-type: none">➤ Linfoot Number Theory Seminar. University of Bristol.
September, 2023	“Crazy for two: Genus 2 curves in characteristic 2 via Kummer surfaces.” <ul style="list-style-type: none">➤ Young Researchers in Algebraic Number Theory (Y-RANT). “Kummer surfaces: Bridging the gap between geometry and number theory.” <ul style="list-style-type: none">➤ Queer in Number Theory and Geometry.
June, 2023	“A game-based learning intervention for support classes in Mathematics.” <ul style="list-style-type: none">➤ Warwick Education Conference: Empowering students and staff through small teaching. “An arithmetic expedition into K3 surfaces.” <ul style="list-style-type: none">➤ Junior Number Theory Seminar. University of Warwick.

May, 2023	<p>“Explicit models of Kummer surfaces in characteristic two.”</p> <p>➤ 7th Symposium of the Roman Number Theory Association.</p>
January, 2022	<p>“An introduction to the Hasse principle through examples.”</p> <p>➤ Postgraduate Seminar, University of Warwick.</p>
September, 2021	<p>“Picard-Fuchs equations in families of varieties.”</p> <p>➤ Conference of the IMUS programme <i>PI3: Introduction to Research</i>, Universidad de Sevilla.</p>

Talks in Study Groups and Working Seminars

October, 2023	<p>“$\Gamma(n), \Gamma_1(n)$ and $\Gamma_0(n)$-structures”</p> <p>➤ Study group on moduli problems of elliptic curves.</p> <p>“Rigidity and the construction of the dual abelian variety.”</p> <p>➤ Study group on abelian varieties.</p>
June, 2023	<p>“Classification of rational double points of surfaces in characteristic p.”</p>
May, 2023	<p>“Characterisations of rational double points in surfaces.”</p> <p>“Curves, surfaces and singularities in characteristic p.”</p>
December, 2022	<p>“The Eisenstein ideal.”</p> <p>➤ Study group on Mazur’s torsion theorem.</p> <p>“Hyperelliptic curves and their jacobians.”</p> <p>➤ Study group on isogeny-based cryptography.</p>
October, 2022	<p>“An introduction to Grothendieck topologies.”</p> <p>➤ Study group on Grothendieck topologies and descent.</p>
May, 2022	<p>“Intersection theory on surfaces.”</p> <p>➤ Study group on Hasse-Weil zeta functions.</p>
April, 2022	<p>“Elliptic curves over discrete valuation rings.”</p> <p>➤ Study group on Mazur’s torsion theorem.</p>

Outreach Talks

July, 2023	<p>“Kissing in the 8th dimension.”</p> <p>➤ Talk in the XXXIV National Meeting of Mathematics Students (ENEM), Universidad de Extremadura.</p>
July, 2022	<p>“Braid theory applied to the design of friendship bracelets.”</p> <p>➤ Workshop in the XXIII National Meeting of Mathematics Students (ENEM), Universidad de Valencia.</p> <p>“Hold on tight! (Algebraic) curves are coming up!”</p> <p>➤ Talk in the XXIII National Meeting of Mathematics Students, Universidad de Valencia.</p>
July, 2021	<p>“Very rational irrationals. Approximating with continued fractions.”</p> <p>➤ Plenary talk in the XXII National Meeting of Mathematics Students, Universidad de Murcia.</p>
July, 2019	<p>“Identification of symmetries and wallpaper groups in Nasrid tilings.”</p> <p>➤ Workshop in the XX National Meeting of Mathematics Students, Universidad de Granada.</p>

Posters

July, 2019	<p>“Presentations and 2-colourings of frieze groups.”</p> <p>➤ Award for the best poster of the XX National Meeting of Mathematics Students.</p>
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Conferences attended

March, 2024	Arizona Winter School , University of Arizona, US.
January, 2024	RGAS School on Singularities , Universidad de Sevilla, Spain.
September, 2023	Inaugural Conference of the UK Algebraic Geometry Network , University of Nottingham, UK.
	Young Researchers in Algebraic Number Theory (Y-RANT) , University of Cambridge, UK.
	Queer in Number Theory and Geometry (QuINGs) , West Lexham, UK.
July, 2023	Géométrie Algébrique en Liberté (GAeL) , University of Warwick, UK.
June, 2023	An Expedition into Arithmetic Geometry , Lorentz Center, Netherlands
May, 2023	Spring School in Arithmetic Statistics , Centre International de Rencontres Mathématiques, France.
	7th Symposium of the Roman Number Theory Association , Rome, Italy.
March, 2023	Computational Algebraic Geometry Workshop , University of Warwick, UK.
February, 2023	Symposium on Arithmetic Geometry and its Applications (SAGA) , Centre International de Rencontres Mathématiques, France.
January, 2023	Introduction to SAGA , Centre International de Rencontres Mathématiques, France.
September, 2022	Computational Geometry , University of Nottingham, UK.
August, 2022	Mordell 2022 , University of Cambridge, UK.
May, 2022	3CinG – Symplectic versus Algebraic Geometry , University of Warwick, UK.
April, 2022	Mirrors, Moduli and M-theory in the Midlands , University of Birmingham, UK.