
CURRICULUM VITAE, FEBRUARY 3, 2025

Jesus Martinez Garcia

jesus.martinez-garcia@essex.ac.uk

www.jesumartinezgarcia.net

School of Mathematics, Statistics and Actuarial Science, University of Essex Colchester Campus,
Wivenhoe Park, Colchester, Essex, CO4 3SQ UK.

Algebraic, complex and birational geometer. Research outputs on K-stability, canonical metrics, moduli of log pairs, geometric invariant theory, algebraic surfaces, Fano varieties, singularity theory, classification problems, computational algebraic geometry and positivity of line bundles.

Employment Record

- Oct 2022–now Senior Lecturer in Pure Mathematics. University of Essex. Colchester, UK.
- 2019–Sep 2022 Lecturer in Pure Mathematics. University of Essex. Colchester, UK.
- 2017–2019 Research Associate and member of the Simons Collaboration on Special Holonomy in Geometry, Analysis, and Physics. University of Bath. Bath, UK.
- 2016–2017 Postdoctoral fellow. Max Planck Institute for Mathematics. Bonn, Germany.
- Summer 2015 Adjunct Professor. Korea University. Seoul, Korea
- 2013–2016 J.J. Sylvester Assistant Professor (postdoctoral position). Johns Hopkins University. Baltimore, MD, USA.
- 2009–2013 Tutor. University of Edinburgh. Edinburgh, UK.
- 2007–2008 Research Intern. Networking Research Group (UAM). Madrid, Spain.
- Summer 2007 Intern Programmer. Disney Interactive Studios: Black Rock. Brighton, UK.

Education

- 2025 Senior Fellowship of the Higher Education Academy. AdvanceHE. UK.
- 2021 Fellowship of the Higher Education Academy. AdvanceHE. UK.
- 2009–2013 Ph.D. in Mathematics. University of Edinburgh, UK.
Supervisor: Prof. Ivan Cheltsov. Thesis title: *Dynamic alpha-invariants of del Pezzo surfaces with boundary*.
- 2008–2009 Master of Advanced Study in Mathematics. University of Cambridge, UK.
- 2003–2008 Licenciatura en Matemáticas (equivalent to MMath in Mathematics). Universidad Autónoma de Madrid, Spain.
- 2003–2008 Ingeniería Informática (equivalent to MEng in Computer Engineering). Universidad Autónoma de Madrid, Spain.
- 2006–2007 Erasmus Student (4th year BA/BEng). University of Sussex, UK.
- 1999–2003 SciTech Baccalaureat. IES Perez Galdos. Madrid, Spain.
Summa Cum Laude.

Research Publications

Note: As it is customary in pure mathematics, authors appear in publications alphabetically.

- J. Martinez-Garcia**, Two remarks on asymptotically log Fano pairs. To appear in the ZAG Handbook of Algebraic Geometry. 2024. Preprint: arXiv:2409.18547.
- J. Martinez-Garcia**, T. S. Papazachariou, J. Zhao, K-moduli of log del Pezzo pairs and variations of GIT. 2024. Submitted. Preprint: arXiv:2406.20008.
- I. Cheltsov, T. Duarte Guerreiro, K. Fujita, I. Krylov, **J. Martinez-Garcia**, K-stability of Casagrande-Druel varieties. J. Reine Angew. Math. (Crelle's journal). vol. 2025, no. 818, 2025, pp. 53–113.. Preprint: arXiv:2309.12522.

4. H. Abban, I. Cheltsov, E. Denisova, E. Etxabbarri-Alberdi, A.-S. Kaloghiros, D. Jiao, **J. Martinez-Garcia**, T. Papazachariou, One-dimensional components in the K-moduli of smooth Fano 3-folds. Accepted in *J. Algebr. Geom.* Preprint: arXiv:2309.12518.
5. P. Gallardo, J. Martinez-Garcia, **J. Martinez-Garcia**, H.-B. Moon, D. Swinarski, Computation of GIT quotients of semisimple groups. Submitted. Preprint: arXiv:2305.09081.
6. I. Cheltsov, I. Krylov, **J. Martinez-Garcia**, E. Shinder, On maximally non-factorial nodal Fano threefolds. *Rev. Mat. Iberoam.* **40** (2024), no.5, 1781–1798. Preprint: arXiv:2305.09081.
7. C. Araujo, A.-M. Castravet, I. Cheltsov, K. Fujita, A.-S. Kaloghiros, **J. Martinez-Garcia**, C. Shramov, H. Süß, N. Viswanathan. *The Calabi Problem for Fano Threefolds.* London Math. Soc. Lecture Note Ser., **485**, Cambridge University Press, Cambridge, 2023, vii+441 pp. Preprint: MPIM Preprint Series (2021) 31.
8. **J. Martinez-Garcia**, C. Spotti, Some observations on the dimension of Fano K-moduli. In: Cheltsov, I., Chen, X., Katzarkov, L., Park, J. (eds) *Birational Geometry, Kähler–Einstein Metrics and Degenerations.* Springer Proceedings in Mathematics & Statistics, vol **409**. 609–616 Springer, Cham. Preprint: arXiv:2101.05643
9. P. Cascini, **J. Martinez-Garcia**, Y. Rubinstein, On the body of ample angles of asymptotically log Fano varieties. *Rend. Circ. Mat. Palermo (2)* **72** (2023), no. 2, 773–790. Preprint: arXiv:2007.15595.
10. P. Gallardo, **J. Martinez-Garcia**, C. Spotti, Applications of the moduli continuity method to log K-stable pairs. *J. Lond. Math. Soc. (2)* **103** (2021), no. 2, 729–759. Preprint: arXiv:1811.00088.
11. **J. Martinez-Garcia**, Constant scalar curvature Kähler metrics on rational surfaces. *Math. Nachr.* **294** (2021), no. 8, 1547–1558. Preprint: arXiv:1712.04857.
12. P. Gallardo, **J. Martinez-Garcia**, Z. Zhang, Compactifications of the moduli space of plane quartics and two lines. *Eur. J. Math.* **4** (2018), no. 3, 1000–1034. Preprint: arXiv:1708.08420.
13. I. Cheltsov, **J. Martinez-Garcia**, Unstable polarized del Pezzo surfaces. *Trans. Amer. Math. Soc.* **372** (2019), no. 10, 7255–7296. Preprint: arXiv:1707.06177.
14. P. Gallardo, **J. Martinez-Garcia**, Moduli of cubic surfaces and their anticanonical divisors. *Rev. Mat. Complut.* **32** (2019), no. 3, 853–873. Preprint: arXiv:1607.03697.
15. I. Cheltsov, **J. Martinez-Garcia**, Stable polarized del Pezzo surfaces, *Int. Math. Res. Not. IMRN*(2020), no. **18**, 5477–5505. Preprint: arXiv:1606.04370.
16. P. Gallardo, **J. Martinez-Garcia**, Variations of geometric invariant quotients for pairs, a computational approach, *Proc. Amer. Math. Soc.* **146** (2018), no. 6, 2395–2408. Preprint: arXiv:1602.05282.
17. I. Cheltsov, **J. Martinez-Garcia**, Dynamic alpha-invariants of del Pezzo surfaces, *Int. Math. Res. Not. IMRN* (2016), no. **10**, 2994–3028. Preprint: arXiv:1405.5161.
18. **J. Martinez-Garcia**, Log canonical thresholds of del Pezzo surfaces in characteristic p, *Manuscripta Math.* **145** (2014), no. 1-2, 89–110. Preprint: arXiv:1203.0995.
19. E. Lopez de Vergara, J. Aracil, **J. Martinez**, et. al., Application of ontologies for the integration of network monitoring platforms, in *Proc. 1st European Workshop on Mechanisms for the Future Internet*, 10-11 July 2008, Salzburg, Austria.

20. I. Gutierrez, **J. Martinez**, P. Santiago, et. al., Analisis de la relacion entre la intensidad del trafico de datos y el numero de alumnos en universidades españolas (Analysis of the relationship among the data flow traffic intensity and the number of students in Spanish universities), *JITEL 2007 Proceedings*.

Software Packages

1. P. Gallardo, **J. Martinez-Garcia**, Han-Bom Moon, David Swinarski, Geometric Invariant Theory Sage Package (2024). <https://jesusmartinezgarcia.net/git/>
2. P. Gallardo, **J. Martinez-Garcia**, Variations of GIT quotients package v0.6.13. (2017) Python. DOI: 10.15125/BATH-00458.

Editorial work

1. I. Cheltsov, **J. Martinez-Garcia** (editors), ZAG Handbook of Algebraic Geometry. To appear in CRC Press, 2025.

Research Funding, Awards and Grants

- 2024 Heilbronn Institute for Mathematical Research Small Grants Scheme (to support the conference 'AGGITatE 2025: Groups, Representations and Cohomology'; co-I).
- 2024 Isaac Newton Institute Satellite Programme (a month-long programme 'AGGITatE 2026'; co-I).
- 2024 Foundation Compositio Mathematica grant (conference organisation grant for AGGITatE 2024).
- 2024 Clay Mathematics Institute (conference organisation partnership contribution for AGGITatE 2024).
- 2023 London Mathematical Society Research Schools grant (to organise AGGITatE 2024).
- 2024 Nomination University of Essex Supervisor of the Year Award (student nomination).
- 2023 Overleaf Sponsorship. 'AGGITatE 2023: a workshop on algebraic groups and Cremona transformations'.
- 2023 Nomination University of Essex Outstanding Early Career Researcher (Science and Health) Award.
- 2023 University of Essex Department of Mathematical Sciences, Research and Impact Fund (PI). 'Dynamics of the K-moduli of log del Pezzo surfaces'.
- 2023 University of Essex Department of Mathematical Sciences, Research and Impact Fund (PI). 'Moduli of quartic threefolds'.
- 2023 University of Essex Department of Mathematical Sciences, Research and Impact Fund (PI). '1-dimensional components of the K-moduli of Fano threefolds'.
- 2023 University of Essex Faculty of Science and Health, Research and Impact Support Fund (PI). 'Computational capacity for mathematical sciences via Magma'.
- 2023 Compositio Foundation (Co-PI). 'AGGITatE 2023: a workshop on algebraic groups and Cremona transformations'.
- 2022 London Mathematical Society Scheme 1 Conference organisation grant 12213 (Co-PI). 'AGGITatE 2023: a workshop on algebraic groups and Cremona transformations'.
- 2022 University of Essex Faculty of Science and Health Research, Innovation and Support Fund (PI). 'K-moduli of Fano threefolds'.
- 2022–2024 EPSRC Standard Grant EP/V055399/1 (PI). 'The Calabi problem for smooth Fano threefolds'.
- 2021 Heilbronn Institute for Mathematical Research Focused Research workshop grant (co-PI). Project 'K-stability of smooth Fano 3-folds'.
- 2020 London Mathematical Society Scheme 1 Conference Grant to support 'EDGE Days 2020: Explicit K-stability And Moduli Problems' (co-PI).

- 2020 Glasgow Mathematical Journal Trust grant to support ‘EDGE Days 2020: Explicit K-stability And Moduli Problems’ (co-PI).
- 2020 Compositio Foundation grant to support ‘EDGE Days 2020: Explicit K-stability And Moduli Problems’ (co-PI).
- 2020 Edinburgh Mathematical Society grant to support ‘EDGE Days 2020: Explicit K-stability And Moduli Problems’ (co-PI).
- 2020 Heilbronn Institute for Mathematical Research Focused Research workshop grant (co-PI). Project ‘K-stability of smooth Fano 3-folds’. Withdrawn, due to CoVid-19 pandemic.
- 2019 London Mathematical Society Scheme 9 Celebrating New Appointments (PI).
- 2019 London Mathematical Society Scheme 4 Research in Pairs (PI).
- 2018 Seal of Excellence to my application for a Horizon 2020 Marie Skłodowska-Curie action. This is awarded by the EU’s Horizon 2020 to high-quality project proposals scoring 85% or more in excellence, impact, quality and efficiency of implementation, but which are not funded due to budget constraints.
- 2018–2021 American Institute for Mathematics. SQuaRE program (co-PI). *Computational aspects of GIT with a view toward geometry of moduli spaces.*
- 2017 ICERM Collaborate@ICERM (co-PI). *Interplay among hypersurface singularities, Hodge theory and the moduli of hypersurfaces and their hyperplane sections.*
- 2016 Hausdorff Research Institute for Mathematics Research in Groups (co-PI). *Moduli spaces of log del Pezzo pairs and K-stability.*
- 2013 Alice Margaret Campbell Bequest Fund Award on completion of PhD.
- 2013 London Mathematical Society Invited Lectures 2013 (conference organisation, co-PI).
- 2013 London Mathematical Society Scheme 8 (conference organisation, co-PI).
- 2010–2013 MTEM student scholarship for PhD in Mathematics (School of Mathematics, University of Edinburgh).
- 2012 Dr Laura Wisewell Travelling Scholarship. (School of Mathematics, University of Edinburgh).
- 2011 University of Edinburgh Small Project Grant (University of Edinburgh).
- 2011 London Mathematical Society Young British and Russian Mathematicians Scheme.
- 2010 London Mathematical Society Travel Grants for 2010 International Congress of Mathematics.
- 2008–2010 Scholarship for Postgraduate Studies in the UK. (Fund. Caja Madrid).
- 2008–2009 Honorary Scholar. (Cambridge European Trust).
- 2007–2008 Stipend (part-time Research Intern in the Networking Research Group). (UAM).
- 2004–2008 4 Research Scholarships for Proficiency University students. (Madrid Regional Government).
- 2003 Madrid Government Scholarship for Proficiency A-Levels. (Madrid Regional Government; waiver of university fees).

Postdoctoral Supervision Experience

1. Robert Hanson. Senior Research Officer (Postdoc). University of Essex. Dec 2024-Jul 2025.
2. Tiago Duarte-Guerreiro. Senior Research Officer (Postdoc). University of Essex. Apr 2022-Nov 2023.

PhD Supervision Experience

1. Theodoros S. Papazachariou. University of Essex. Graduated 2022.
2. Charlotte Satchwell. University of Essex. Started Oct 2023.

3. Yufeng Li. University of Essex. Started Oct 2023.

Other Supervision Experience

1. Master dissertations, University of Essex. 2022–2023, 9 dissertations; 2021–2022, 5 dissertations; 2020–2021, 5 dissertations.
2. Undergraduate Final Year Projects, University of Essex. 2019–2020, 4 projects; 2020–2021, 7 projects; 2021–2022, 5 projects; 2022–2023, 3 projects; 2023–2024, 2 projects.
3. Conor Shackle. Undergraduate Year Long Project student. University of Bath. 2018–2019. Project: *The geometry of complex algebraic curves*.
4. Muhammad Sohaib Khalid. Undergraduate research summer student. University of Bath. 2018. Project: *Canonical metrics and automorphism groups of surfaces*.

Invited Talks at Conferences

- July 2024 *Variations of K -moduli for del Pezzo surfaces*. FRACASSO Workshop, University of Bordeaux, France.
- May 2024 *Variations of K -moduli for del Pezzo surfaces*. K -stability and moment maps, Isaac Newton Institute, University of Cambridge, UK.
- Nov 2023 *Computational Geometric Invariant Theory*. COW Seminar, University of Cambridge, UK.
- Sep 2023 *Computational Geometric Invariant Theory*. CMI Workshop “ K -stability and Birational Geometry”, University of Oxford, UK.
- Jan 2023 *The Calabi Problem: Kaehler-Einstein metrics, K -stability and the description of compact moduli of Fano varieties in low dimensions*. 7th Annual Meeting of the Spanish Network for Algebraic Geometry and Singularity Theory. Basque Center for Applied Mathematics, Bilbao, Spain.
- Nov 2022 *Some observations on the dimension of Fano K -moduli*. Birational Geometry and K -stability of Fano Varieties. International Centre for Mathematical Sciences (ICMS), University of Edinburgh.
- Jul 2022 *Some observations on the dimension of Fano K -moduli*. K -stability and Birational Geometry, University of Nottingham.
- Sep 2021 *The Calabi problem for Fano 3-folds I*. K -stability and Kähler Geometry, University of Cambridge.
- Feb 2021 *Asymptotically log del Pezzo Surfaces*. Fano Varieties And Birational Geometry (online conference), University of Nottingham.
- Sep 2020 *Asymptotically log del Pezzo Surfaces*. ZAG Marathon (online conference), worldwide.
- Nov 2019 *The moduli continuity method for log Fano pairs*. Bayes Centre. EDGE Days 2019. University of Edinburgh, Edinburgh, UK.
- Jun 2019 *K -stable polarised del Pezzo surfaces*. Birational Geometry, Kähler-Einstein metrics and Degenerations, Institute of Mathematical Sciences, ShanghaiTech University, Shanghai, China.
- Apr 2019 *The moduli continuity method for log Fano pairs*. Conference “Birational Geometry, Kähler-Einstein Metrics And Degenerations, Laboratory of Mirror Symmetry, Higher School of Economics, Moscow, Russia.
- Feb 2019 *The moduli continuity method for log Fano pairs*. GLEN Seminar, University of Manchester, UK.
- Feb 2018 *K -Stability, Canonical Metrics, and Calabi Dream Rational Surfaces*. COW Seminar. City, University of London, UK.
- Dec 2017 *Compactification of the moduli space of certain $K3$ surfaces*. The Shokurovs. Center for Geometry and Physics, Institute for Basic Science. Pohang, Korea.

- Sep 2017 *Métricas de Kähler con curvatura escalar constante en superficies de del Pezzo*. Sesión paralela de Geometría Algebraica. IV Congreso de Jóvenes Investigadores, Real Sociedad Matemática Española, Universitat de València, Spain.
- Aug 2017 *Stability and cscK metrics on polarised del Pezzo surfaces*. Stability, Boundedness and Fano Varieties. Beijing International Centre for Research Mathematics, China.
- Aug 2017 *Moduli of Fano hypersurfaces and anti-canonical sections via computational algebraic geometry*. Experimental Classification of Fano Varieties. University of Tübingen, Germany.
- Jun 2017 *Stability and cscK metrics on polarised del Pezzo surfaces*. EDGE Days 2017. University of Edinburgh, UK.
- Apr 2017 *Positivity of the twisted CM line bundle for log pairs*. Positivity in algebraic and complex geometry. International Centre for the Mathematical Sciences, Edinburgh, UK.
- Jun 2016 *K-stability of Polarized del Pezzo surfaces*. Edge Days. University of Edinburgh, Scotland, UK.
- Jul 2013 *Lectures in Kähler-Einstein metrics and algebraic geometry. Computing Tian's alpha-invariant*. Graduate workshop on Kähler Geometry, Simons Center for Geometry and Physics. Stony Brook, NY. USA.
- Jun 2013 *Kähler-Einstein metrics with cone singularities and Donaldson's programme*. London Mathematical Society Invited Lectures 2013 (support talk). University of Edinburgh. Edinburgh, UK.
- May 2013 *Kähler-Einstein metrics with cone singularities and birational geometry*. NCTS/TPE Workshop. Taipei, Taiwan.
- May 2010 *Introduction to algebraic topology*. With Nir Avni. Sheaves in Representation Theory. Skye, UK.
- Feb 2010 *Stiefel-Whitney classes and classification of real projective spaces*. SMSTC. Scotland, UK.

Invited Talks at Department Seminars

- Oct 2023 *Computational Geometric Invariant Theory*. University of Illinois at Chicago's online Quantum Topology Seminar. Online.
- May 2020 *The moduli continuity method for log Fano pairs* (delivered remotely due to CoVid-19 pandemic). University of Nottingham, Nottingham, UK.
- May 2019 *Revisiting Hilbert's work on invariants of polynomials to study cubic surfaces*. Mathematical Sciences Departmental Seminar, University of Essex, Colchester, UK.
- Apr 2018 *Asymptotically log del Pezzo surfaces*. Algebra and Number Theory seminar, University of Maryland, College Park, MD, USA.
- Mar 2018 *Strong Calabi dream surfaces and K-stability of polarised del Pezzo surfaces*. Algebraic Geometry Seminar, Johns Hopkins University, Baltimore, MD, USA.
- Apr 2017 *Stability and cscK metrics on polarised del Pezzo surfaces*. University of Bath, UK.
- Mar 2017 *Existence of constant scalar curvature Kähler metrics on polarised del Pezzo surfaces*. University of Versailles-St. Quentin, France.
- Feb 2017 *Geometric Invariant Theory and Moduli of log Pairs*. University of Düsseldorf, Germany.
- Feb 2017 *On the moduli space of log K-polystable pairs formed by a hypersurface and a hyperplane section*. University of Cambridge, UK.
- Dec 2016 *Moduli space of cubic surfaces and their anticanonical divisors*. Centre for Quantum Geometry of Moduli Spaces, Aarhus University, Denmark.
- Dec 2016 *Moduli space of cubic surfaces and their anticanonical divisors*. University of Duisburg-Essen, Germany.
- Oct 2016 *Moduli space of cubic surfaces and their anticanonical divisors*. University of Basel, Switzerland.

- Oct 2016 *Moduli space of cubic surfaces and their anticanonical divisors.* EDGE Seminar. University of Edinburgh, UK.
- Aug 2015 *On the moduli space of cubic surfaces and their anticanonical divisors.* Simons Center for Geometry and Physics. University of Stony Brook, NY. USA.
- Jul 2015 *Singular Kähler-Einstein metrics of small angles.* Centre for Geometry and Physics. Postech. Pohang, Korea.
- Jun 2015 *On the moduli space of cubic surfaces and their anticanonical divisors.* University of California, San Diego. San Diego, CA. USA.
- Mar 2015 *On the moduli space of cubic surfaces and their anticanonical divisors.* University of Harvard. Cambridge, MA. USA
- Feb 2015 *On the moduli space of cubic surfaces and their anticanonical divisors.* University of Notre Dame. Notre Dame, IN. USA.
- Dec 2014 *On the moduli space of cubic surfaces and their anticanonical divisors.* MAGIC Seminar. Imperial College London. London, UK.
- Oct 2014 *Singular Kähler-Einstein metrics of small angles.* JHU-UMD Complex Geometry Seminar. University of Maryland. College Park, MD. USA.
- Sep 2014 *Asymptotically log del Pezzo surfaces.* Algebraic Geometry Seminar. University of Georgia. Athens, GA. USA.
- Mar 2014 *Kähler-Einstein edge metrics on log del Pezzo surfaces.* Algebraic Geometry Seminar. Johns Hopkins University. Baltimore, MD. USA.
- Nov 2013 *Kähler-Einstein edge metrics on Fano varieties via birational geometry.* Algebraic Geometry Seminar. University of Missouri-Columbia, MI. USA.
- Apr 2013 *Kähler-Einstein metrics with cone singularities and birational geometry.* MAGIC Seminar. Imperial College London. London, UK.
- Jan 2013 *Kähler-Einstein metrics meet Birational Geometry on a del Pezzo surface.* Junior Geometry Seminar. Imperial College London. London, UK.
- Dec 2012 *Donaldson's program to solve the Yau-Tian-Donaldson conjecture from an algebraic viewpoint.* Kuznetsov's seminar. Steklov Mathematical Institute. Moscow, Russia.
- Nov 2012 *Minimal Model Programme for dummies.* Geometry Club. Edinburgh, UK.
- Nov 2012 *Intersection Theory and classification of surfaces for the layman.* Geometry Club. Edinburgh, UK.
- Feb 2012 *Degenerations of del Pezzo surfaces after Hacking and Prokhorov.* Edinburgh Geometry Seminar. University of Edinburgh. UK.
- Jan 2012 *The Tale of the Minimal Model Program.* 6th Edinburgh-Heriot-Watt Colloquium. UK.
- Dec 2011 *Log canonical thresholds of del Pezzo surfaces, computation and applications.* Iskovskikh Seminar. Steklov Mathematical Institute, Moscow, Russia.
- Apr 2010 *Chords of Alexander Grothendieck's mathematics.* PG Colloquium. University of Edinburgh. Edinburgh, UK.
- Feb 2010 *What is a toric variety?* Geometry Club. University of Edinburgh. Edinburgh, UK.
- May 2010 *Introduction to algebraic topology.* With Nir Avni. Sheaves in Representation Theory. Skye, UK.
- Mar 2009 *Yau's solution to the Calabi conjecture.* Part III seminar series. University of Cambridge. Cambridge, UK.
- Dec 2008 *Parallelizable manifolds.* Part III seminar series. University of Cambridge. Cambridge, UK.

Contributed Talks

- Sep 2020 *Strong calabi dream rational surfaces.* Simons's conference on K-stability. Higher Dimensional Geometry in NYC, Simons Foundation/Simons Center for Geometry and Physics. Online (worldwide).

Apr 2011 *Log canonical thresholds of del Pezzo surfaces in characteristic p* . Young Researchers in Mathematics. University of Warwick, UK.

Poster Presentations

Sep 2016 *Moduli space of cubic surfaces and their anticanonical divisors*. Cremona Conference 2016. University of Basel, Switzerland.

Nov 2014 *Kähler-Einstein metrics and birational geometry*. AGNES. University of Pennsylvania. Philadelphia, PA. USA.

Apr 2014 *Dynamic alpha-invariants of del Pezzo surfaces*. Texas Algebraic Geometry Symposium. Rice University. Houston, TX. USA.

Oct 2013 *Kähler-Einstein metrics and birational geometry*. AGNES. Boston College, MA. USA.

Sep 2013 *Log canonical thresholds, tigers and cats*. Foliation Theory in Algebraic Geometry. Simons Foundation, NY. USA.

Oct 2012 *Log canonical thresholds, tigers and cats*. Groups of Automorphisms in Birational and Affine Geometry. Levico, Italy.

Short Research Visits

Apr-May 2024 Isaac Newton Institute, University of Cambridge, UK.

Apr 2023 Gökova Geometry and Topology Institute. Turkey.

Jun 2021 American Institute of Mathematics (virtual, due to pandemic). San Jose, CA, USA.

Jun 2018 American Institute of Mathematics. San Jose, CA, USA.

Mar-Apr 2018 University of Maryland. College Park, MD, USA.

Dec 2016 Centre for Quantum Geometry of Moduli Spaces, Aarhus University. Aarhus, Denmark.

Oct 2016 University of Edinburgh. Edinburgh, UK.

Jun-Jul 2016 *Hausdorff Research Institute for Mathematics*. University of Bonn, Bonn. Germany.

Jan 2016 *Mathematical Sciences Research Institute*. Berkeley, CA. USA.

Fall 2015 *Simons Center for Geometry and Physics*. Stony Brook University, NY. USA.

Jul 2013 *Simons Center for Geometry and Physics*. Stony Brook, NY. USA.

May 2013 *NCTS-TPE*. Taipei, Taiwan.

Dec 2012 *Bogomolov's Laboratory of Algebraic Geometry, HSE/Steklov Mathematical Institute*. Moscow, Russia.

Dec 2011 *Bogomolov's Laboratory of Algebraic Geometry, HSE/Steklov Mathematical Institute*. Moscow, Russia.

May 2011 *Moduli Spaces Program*. Cambridge, UK.

Aug 2010 Indian Association for the Cultivation of Science. Kolkata, India.

Conferences Organised

Jul 2024 London Mathematical Society Summer School on Moduli Theory (AGGITATE 2024). University of Essex, UK.

Feb 2024 COW Seminar (local organiser). University of Essex, UK.

Jun 2023 AGGITATE 2023: a workshop on algebraic groups and Cremona transformations. University of Essex, UK.

Apr 2022 AGGITATE Days 2022: Algebraic Groups and Geometric Invariant Theory at Essex. University of Essex, UK.

Nov 2021 EDGE Days 2021: Explicit K-stability And Moduli Problems. University of Edinburgh, UK.

- Dec 2020 EDGE Days 2020: Explicit K-stability And Moduli Problems. University of Edinburgh (online), UK.
- Apr 2020 AGGITATE: Algebraic Groups and Geometric Invariant Theory at Essex Days (postponed to 2022 due to CoVid-19 pandemic). University of Essex, UK.
- Jan 2020 CoDiMa Workshop - Tools for Discrete Computational Mathematics. University of Essex, UK.
- Jun 2013 London Mathematical Society Lecture Series by Prof Bogomolov. University of Edinburgh. UK.
- Apr 2013 Workshop: Characteristic p methods in Birational Geometry. Imperial College London. UK.
- Feb 2010 SMSTC Seminar Series 2009/2010. Scotland. UK.

Regular Seminars Organised

- 2024–25 Essex's Algebraic Groups Reading Group. University of Essex, UK.
- 2023–24 Essex's Scheme Theory Reading Group. University of Essex, UK.
- 2020–22 MESS (Mathematics at Essex Seminar Series). University of Essex, UK.
- 2020–22 ZAG (Zoom Algebraic Geometry) Seminar. Main Co-organiser and host. Online/worldwide.
- May–Jun 2020 Essex Mathematics Seminar. University of Essex, UK.
- 2014–16 Algebraic Geometry Seminar. Johns Hopkins University. USA.
- 2013–14 JHU-UMD Complex Geometry Seminar. Maryland, USA.
- 2010–11 Geometry Club (student weekly seminar). University of Edinburgh. UK.

Teaching Experience

- 2024–2025 Group Theory. (University of Essex, UK).
- 2024–2025 MAGIC 076 Algebraic Geometry (UK-wide network).
- 2024–2025 Commutative Algebra. (University of Essex, UK).
- 2023–2024 MAGIC 076 Algebraic Geometry (UK-wide network).
- 2023–2024 Commutative Algebra. (University of Essex, UK).
- 2022–2023 Group Theory. (University of Essex, UK).
- 2021–2022 Group Theory. Commutative Algebra. (University of Essex, UK).
- 2020–2021 Linear Algebra. Group Theory. Graph Theory. (University of Essex, UK).
- 2019–2020 Numerical Methods and Computation. Group Theory. (University of Essex, UK).
- 2015–2016 Calculus II for Engineers. Complex Analysis. (Johns Hopkins University, USA).
- Summer 2015 Linear Algebra and Engineering Mathematics (Korea University, Korea)
- 2014–2015 Calculus II for Engineers. Differential Geometry. (Johns Hopkins University, USA).
- 2013–2014 Methods of Complex Analysis. Linear Algebra. (Johns Hopkins University, USA).
- 2009–2013 Summer introductory course to Mathematics. Occasional lecture covers and wide tutoring experience (University of Edinburgh, UK).

Outreach - Talks and Activities

- Jan 2022 *Careers and degrees in mathematical sciences.* Colchester County High School for Girls, Colchester, Essex, UK.
- Jul 2021 *Veni, codi, vinci: learn to send coded messages like Julius Caesar did while trying to decrypt your friends.* Anglo-European School, Ingatestone, Essex, UK.

Nov 2020 *Veni, codi, vinci: learn to send coded messages like Julius Caesar did while trying to decrypt your friends.* Online activity for year 0 and year 1 mathematical sciences students. University of Essex, UK.

Outreach - Published Articles

1. **J. Martínez-García**, A Visit to Moscow. *LMS Newsletter* **416**, p. 22 (2012).
2. **J. Martínez-García**, Indian Summer. *LMS Newsletter* **400**, 25–26 (2012).

Administration Duties

2024–now Deputy Director of Postgraduate Research Studies. University of Essex, UK.
2023–now Research Theme Leader (Algebra, Geometry and Discrete Mathematics). University of Essex, UK.
2023–2024 Director of Postgraduate Research Studies. University of Essex, UK.
2022–2023 Deputy Director of Research. University of Essex, UK.
2021–now MAGIC Network Departmental Link. University of Essex, UK.
2021–2023 Workload officer. University of Essex, UK.
2020–now Applicant Day Team. University of Essex, UK.
2021–22 Lead Departmental Adjudicator (academic offences). University of Essex, UK.
2020–21 Outreach Team. University of Essex, UK.
2021 Research Deputy Theme Leader of Algebra, Geometry and Discrete Mathematics. University of Essex, UK.
2019–2022 Department Library Link. University of Essex, UK.

Professional Service/Memberships

London Mathematical Society Associate member (2009–2016); Ordinary member (2019–now), Departmental Representative at the University of Essex (2022–2024), Research Grants Committee member (2023–2026).
British Mathematical Colloquium Scientific Committee member (LMS Representative, since 2024).
American Mathematical Society Mathe-Member 2013–2016.
EPSRC Associate Peer Review College member since 2020.
JSPS Occasional grant reviewer since 2022.
UKRI Early Career Researcher Forum since 2020. Talent Peer Review College Member.
MAGIC Essex Department Node since 2022. Academic Steering Committee member since 2022. Programme Committee member since 2022.
Referee for Invent. Math., Springer INdAM series, Int. Math. Res. Not. IMRN, Sb. Math., Proc. Edinb. Math. Soc. (2), Eur. J. Math., Math. Nachr., Mathematics, Int. J. Math., CRC Press (books)
Reviewer for Mathematical Reviews, Zentralblatt Math.
Grant reviewer for Japan Society for the Promotion of Science, International Centre for Mathematical Sciences (ICMS), EPSRC, Spanish Ministry of Science, Slovak Research and Development Agency

Other Skills

Languages Spanish (Native), English (Proficiency. Qualifications: **Cambridge First Certificate in English, Cambridge Proficiency Certificate in English**), French(Intermediate), Italian (Basic).

Programming Magma, Singular, SageMath, Maple, Matlab, Macaulay2, Mathematica, Object-Oriented Programming, Java, Python, C++, L^AT_EX, UNIX API.