

María Cumplido Cabello

Curriculum Vitae

October 15, 2022

Date of birth: 25th April 1992
Place of birth: Córdoba, Andalusia (Spain)
Nationality: Spanish

Positions and grants

- 01.02-2021 – **Post-doctoral fellowship** at the Mathematical Institute of Universidad de Sevilla (IMUS). Funded by Junta de Andalucía (Plan Andaluz de Investigación, Desarrollo e Innovación 2020).
- 25.09.2020 – Profesora Ayudante Doctora (**Associate Professor**) at Universidad Complutense de Madrid.
- 31.01.2021
- 2019 – 2020 **Research Associate** at Heriot-Watt University. Funded by EPSRC.
- 2018 – 2019 **Post-doctoral fellowship** at University of Burgundy.
- 2015–2018 **PhD contract** at University of Rennes 1.

Membership

- 2021-Present Member of the Commission for Young Mathematicians of the Royal Spanish Mathematical Society.

Accreditations

- May 2021 **Accreditation to be hired as “Profesora Contratada Doctora”**, Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA), Spain.
- January 2019 **Qualification: Accreditation to be hired as “Maître de Conférences”**, Ministère de l’Enseignement supérieur et de la Recherche, France.

Education

- 2015 - 2018 **Ph.D. in Mathematics**, Université de Rennes 1 & Universidad de Sevilla, Thesis: "Parabolic subgroups and genericity in Artin–Tits groups of spherical type". Advisors: Bert Wiest & Juan González-Meneses.
- 2014-2015 **Master in Advanced Mathematics**, Universidad de Sevilla, Final Master Project: "Braids and sphere homotopy groups.", Mark 10/10 with honors.

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- 2013–2014 **Master 1 en Sciences et Technologies Mention Mathématiques as ERASMUS student**, *Université Pierre et Marie Curie, Paris VI*.
- 2010–2014 **Degree in Mathematics**, *Universidad de Sevilla*, Average Mark– 8,24/10.
Final Degree Project: "Algorithms in braids groups" Mark 10/10.
- 2006–2010 Student of ESTALMAT-Andalucía project. Sociedad Matemática THALES.
<http://thales.cica.es/estalmat/occidental/>

Research papers

- [14] Javier Aramayona, Julio Aroca, María Cumplido, Rachel Skipper, Xiaolei Wu. **Block mapping class groups and their finiteness properties**. Preprint. ArXiv:2207.06671.
- [13] Rubén Blasco-García, María Cumplido, Rose Morris-Wright. **The word problem is solvable for 3-free Artin groups**. Preprint. ArXiv:2204.03523.
- [12] María Cumplido, Delaram Kahrobaei, Marialaura Noce. **The root extraction problem in braid group-based cryptography**. Preprint. ArXiv:2203.15898.
- [11] María Cumplido. **The conjugacy stability problem for parabolic subgroups of Artin groups**. To appear in *Mediterranean Journal of Mathematics*. doi:10.1007/s00009-022-02153-9.
- [10] María Cumplido, Alexandre Martin, Nicolas Vaskou. **Parabolic subgroups of large-type Artin groups**. To appear in *Mathematical Proceedings of the Cambridge Philosophical Society*. doi:10.1017/S0305004122000342.
- [9] Julio Aroca, María Cumplido. **A new family of infinitely braided Thompson's groups**. *Journal of Algebra* 607, Part B, 2022, 5–34. Special Issue dedicated to Patrick Dehornoy.
- [8] María Cumplido, Luis Paris. **Commensurability in Artin groups of spherical type**. *Revista Matemática Iberoamericana* 38 (2), 2022, 503–526.
- [7] Yago Antolín, María Cumplido. **Parabolic subgroups acting on the additional length graph**. *Algebraic & Geometric Topology* 21 (4), 2021, 1791–1816.
- [6] Matthieu Calvez, Bruno A. Cisneros de la Cruz, María Cumplido. **Conjugacy stability of parabolic subgroups of Artin–Tits groups of spherical type**. *Journal of Algebra* 556, 2020, 621–633.
- [5] María Cumplido, Juan González-Meneses, Marithania Silvero. **The root extraction problem for generic braids**. *Symmetry-Basel* 11 (11), 2019, 1327.
- [4] María Cumplido, Volker Gebhardt, Juan González-Meneses, Bert Wiest. **On parabolic subgroups of Artin–Tits groups of spherical type**. *Advances in Mathematics* 352, 2019, 572–610.
- [3] María Cumplido. **On the minimal positive standardizer of a parabolic subgroup of an Artin–Tits group**. *Journal of Algebraic Combinatorics* 49 (3), 2019, 337–359.
- [2] María Cumplido. **On the loxodromic actions of Artin–Tits groups**. *Journal of Pure and Applied Algebra* 223 (1), 2019, 340–348.

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- [1] María Cumplido, Bert Wiest. **A positive proportion of elements of mapping class groups is pseudo-Anosov**. *Bulletin of the London Mathematical Society* 50 (3), 2018, 390–394.

Chapters in Books

Social Sciences

- [1] María Cumplido. **Los algoritmos de las redes sociales y el debate feminista**, 33–50 in *Feminismo Digital. Violencia contra las mujeres y violencia sexista en Internet*. Colección Conocimiento Contemporáneo. Dykinson. Madrid, Spain. 2021. ISBN 978-84-1377-589-0

Conferences

Invited talks

- [16] **A first algorithm to solve the word problem for 3-free Artin groups**, *Nord-deutsches Gruppentheorie-Kolloquium 2022*, Düsseldorf (Germany) 13-15 October 2022.
- [15] **Conjugacy stability in Artin groups**, *Generalized braid groups*, Amiens (France) 29 August - 2 September 2022.
- [14] **The root extraction problem in group braid-based cryptography**, *2022 International Meeting AMS-EMS-SMF*, Special Session, Grenoble (France) 18 - 22 July 2022.
- [13] **Root extraction problem in group braid-based cryptography**, *2022 Association for Women in Mathematics Symposium*, Special Session, Minneapolis (United States) 16 - 19 June 2022.
- [12] **How to know if a parabolic subgroup of an Artin group merges conjugacy classes**, *Braids in Representation Theory and Algebraic Combinatorics*, Braid Semester at ICERM, Brown University, Providence (United States) 14 - 19 February 2022.
- [11] **Fusión de clases de conjugación en grupos de Artin-Tits**, *Congreso Bienal de la Real Sociedad Matemática Española*, Special session, Ciudad Real (Spain) 17 - 21 January 2022.
- [10] **Una nueva familia de grupos de Thompson trenzados**, *XXVII Encuentro de Topología*, Seville (Spain) 22 - 23 October 2021.
- [9] **Braiding trees: a new family of braided Thompson's groups**, *Braids and beyond, conference in the memory of Patrick Dehornoy*, Caen (France) 8 - 10 September 2021.
- [8] **Systolicity for large-type Artin groups**, *Young Geometric Group Theory X*, Online – Newcastle (United Kingdom) 26 - 20 July 2021.
- [7] **Garside structure in Artin groups**, *Perspectives on Artin groups*, Workshop, Online – Edinburgh (United Kingdom) 24 - 27 May 2021.

- [6] **The poset of parabolic subgroups of large-type Artin groups**, *AMS 2021 Spring Southeastern Sectional Meeting*, Special session, Online – Georgia (United States) 13 - 14 March 2021.
- [5] **Complexes of parabolic subgroups for Artin groups**, *Virtual Geometric Group Theory conference*, Online – CIRM Luminy (France) 1 - 5 June 2020.
- [4] **Cómo calcular la raíz k -ésima de una trenza genérica**, *V Congreso de Jóvenes Investigadores de la Real Sociedad Matemática Española*, Parallel session, Castelló de la Plana (Spain) 27 - 31 January 2020.
- [3] **Artin-Tits groups of spherical type up to commensurability**, *II Joint meeting Spain-Brazil in Mathematics*, Parallel session, Cádiz (Spain) 11 - 14 December 2018.
- [2] **Loxodromic actions in Artin-Tits groups**, *Young researcher meeting in dynamics and geometry*, Rennes (France) 6 - 8 September 2017.
- [1] **On the genericity of loxodromic actions of Artin-Tits groups**, *IV Congreso de Jóvenes Investigadores de la Real Sociedad Matemática Española*, Parallel session, Valencia (Spain) 4 - 8 September 2017.

Contributed talks

- [10] **Conjugacy stability in Artin groups**, *II Women in Algebra and Symbolic Computations*, Bad Dürkheim (Germany) 29 November - 1 December 2021.
- [9] **Braids, curves on surfaces and parabolic subgroups**, *VII Encuentro de jóvenes topólogos*, Barcelone (Spain) 16 - 18 October 2018.
- [8] **Genericity conjecture for loxodromically acting elements of Artin-Tits groups**, *Braids, configuration spaces and homotopy theory*, Salvador de Bahia (Brazil) 23 - 27 July 2018.
- [7] **Conjugacy stability of standard parabolic subgroups of Artin groups of spherical type**, *XII Encuentro de Teoría de Grupos*, Zaragoza (Spain) 28 - 30 June 2018.
- [6] **Braids: a link between topology and algebra**, *BYMAT conference*, Madrid (Spain) 7 - 9 May 2018.
- [5] **Advances in the understanding of parabolic subgroups of Artin-Tits groups**, *WinterBraids VIII*, Luminy (France) 5 - 9 February 2018.
- [4] **On the proportion of pseudo-Anosov elements in mapping class groups**, *VI Encuentro de jóvenes topólogas y topólogos*, Bilbao (Spain) 18 - 19 October 2017.
- [3] **On the genericity of loxodromic actions in Artin-Tits groups**, *yGAGTA, Geometric and Asymptotic Group Theory with Applications*, Bilbao (Spain) 26 June- 7 July 2017.
- [2] **Calculando el estandarizador minimal de un sistema de curvas en D_n** , *V Encuentro de Jóvenes Topólogos*, Málaga (Spain) 18-20 October 2016.
- [1] **Estandarizadores minimales de subgrupos parabólicos de Artin**, *XI Encuentro en Teoría de Grupos*, Barcelone (Spain) 8-10 September 2016.

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Posters

- [7] **Parabolic subgroups of large-type Artin groups**, *The dual approach to Coxeter and Artin groups; Garside theory and applications*, Berlin (Germany) 30 August - 4 September 2021.
- [6] **Artin groups of spherical type up to commensurability**, *Young Geometric Group Theory Meeting VIII*, Bilbao (Spain) 30 June - 5 July 2019.
- [5] **The complex of irreducible parabolic subgroups**, *Women in Homotopy Theory and Algebraic Geometry II*, Berlin (Germany) 20-22 March 2019.
- [4] **Genericity conjecture for mapping class groups**, *Young Geometric Group Theory Meeting VII*, Les Diablerets (Switzerland) 12-16 March 2018.
- [3] **Genericity conjecture in mapping class groups**, *XXIV Encuentro de Topología*, Bilbao (Spain) 20-21 October 2017.
- [2] **Minimal standardizer of a parabolic subgroup of an Artin-Tits group**, *Young Geometric Group Theory Meeting VI*, Oxford (United Kingdom) 20-24 March 2017.
- [1] **Minimal standardizer of a parabolic subgroup of an Artin-Tits group**, *WinterBraids VII*, Caen (France) 27 February- 2 March 2017.

Round tables

- [1] **Mujeres y matemáticas: pasado, presente y futuro**, 4º Congreso de Jóvenes Investigadores de la Real Sociedad Matemática Española, Valencia (Spain) 4 - 8 September 2017.

Round tables (Social Sciences)

- [3] **Democracia Digital**, *Propuesta de acciones concretas para superar el sesgo de género en el primer año de formación universitaria en Matemáticas*, II Congreso Internacional Feminismo Digital. Derechos de las mujeres en la era de Internet, (Online) 21 - 22 July 2022.
- [2] **Cultura Popular en la Sociedad Digital**, *Análisis de la construcción de personajes femeninos en la cultura popular a través de la wiki TV Tropes*, II Congreso Internacional Feminismo Digital. Derechos de las mujeres en la era de Internet, (Online) 21 - 22 July 2022.
- [1] **Democracia Digital**, *Los algoritmos de las redes sociales y el debate feminista*, I Congreso Internacional Feminismo Digital. Derechos de las mujeres en la era de Internet, (Online) 1 - 2 July 2021.

Seminars and meetings

- [38] **The root extraction problem in group braid-based cryptography**, *Cryptography Seminar*, The City University of New York (United States). 12 April 2022.
- [37] **Conjugacy stability in Artin groups**, *Topology Seminar*, Brandeis University (United States). 5 April 2022.
- [36] **Estabilidad por conjugación para subgrupos parabólicos de grupos de Artin**, *Coloquio Iberoamericano de Álgebra y Teoría de Nudos (Online)*, 10 December 2021.

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- [35] **Parabolic subgroups of large-type Artin groups**, *Geometry and Topology seminar (Online)*, The City University of New York (United States). 4 April 2021.
- [34] **Intersection of parabolic subgroups of large-type Artin groups**, *Groups and Geometry in the South East meeting (Online)*, University of Warwick (United Kingdom). 26 March 2021.
- [33] **Parabolic subgroups of large-type Artin groups**, *Topology Seminar (Online)*, Brandeis University (United States). 17 March 2021.
- [32] **Systolicity in Artin groups of large type**, *Algebra Seminar (Online)*, Basque Country University (Spain). 24 February 2021.
- [31] **Braiding trees: A new family of braided Thompson's groups**, *K-OS, Knot Online Seminar*, 18 February 2021, <https://robert.perso.math.cnrs.fr/Kos/Video/KOS-Cumplido.webm>.
- [30] **Subgrupos parabólicos de grupos de Artin grandes**, *Group Theory Seminar*, Instituto de Ciencias Matemáticas, Madrid (Spain). 27 January 2021.
- [29] **Strand diagrams and generalised braided Thompson's groups**, *Seminari Informal de Matemàtiques de Barcelona (Online)*, 16 December 2020, <http://www.ub.edu/simba/en/>.
- [28] **Sous-groupes paraboliques des groupes d'Artin larges**, *Groups and Geometry online seminar for French-speakers*, 10 December 2020, <http://www-fourier.univ-grenoble-alpes.fr/seminaire-gg/>.
- [27] **Teoría de trenzas: un puente entre la geometría y el álgebra**, *Online seminar*, Instituto Universitario de Investigación CIO, Universidad Miguel Hernández de Elche (Spain). 16 November 2020.
- [26] **A new family of infinitely braided Thompson's groups**, *Algebra and geometry seminar (Online/Webminar)*, Newcastle University (United Kingdom). 9 November 2020.
- [25] **Complexes de sous-groupes paraboliques pour des groupes d'Artin-Tits**, *Séminaire de géométrie, topologie et dynamique (Online / Webminar)*, Université Paris Saclay (France). 30 April 2020.
- [24] **Computing k -th roots in braid groups**, *Group Theory Seminar (Online / Webminar)*, Heriot-Watt University (United Kingdom). 2 April 2020.
- [23] **Sous-groupes paraboliques des groupes d'Artin sphériques**, *Algebra, Topology and Geometry seminar*, Université Côte d'Azur (France). 12 Mars 2020.
- [22] **Absorbable elements of Garside structures and parabolic subgroups of spherical Artin groups**, *Topology & Geometry seminar*, National University of Singapore (Singapore). 25 February 2020.
- [21] **Braid Theory: Many strings to our bow !**, *Postgraduate Forum*, Lancaster University (United Kingdom). 10 February 2020.
- [20] **The k -th root extraction problem for braid groups**, *Algebra seminar*, University of Leeds (United Kingdom). 10 December 2019.

- [19] **Links between two complexes for spherical Artin groups**, *Meeting of the North British Geometric Group Theory*, International Centre of Mathematical Sciences, Edinburgh (United Kingdom). 13 November 2019.
- [18] **Finding the k -th root of a generic braid**, *Algebra seminar*, University of Aberdeen (United Kingdom). 23 October 2019.
- [17] **Subgrupos parabólicos y el grafo de longitud suplementaria en grupos de Artin**, *Topology & Geometry Seminar*, Universidad Nacional Autónoma de México en Oaxaca (Mexico). 20 September 2019.
- [16] **Trenzas, curvas y subgrupos parabólicos**, *Coloquio Oaxaqueño de Matemáticas*, Universidad Nacional Autónoma de México in Oaxaca (Mexico). 19 September 2019.
- [15] **Qu'est-ce que c'est une tresse?**, *Students seminar*, Université de Bourgogne (France). 4 April 2019.
- [14] **Conjugacy stability of standard parabolic subgroups of Artin groups of spherical type**, *Journée scientifique de l'IMB*, Université de Bourgogne (France). 1 April 2019.
- [13] **Stabilité par conjugaison dans les sous-groupes paraboliques des groupes d'Artin de type sphérique**, *Analytic geometry seminar*, Université de Rennes 1 (France). 14 February 2019.
- [12] **Trois façons de montrer que le groupe de tresses est sans torsion**, *Junior seminar in geometry*, Université de Rennes 1 (France). 14 February 2019.
- [11] **Sous-groupes paraboliques dans le complexe de longueur supplémentaire**, *Geometry in Dynamical Systems seminars*, Université de Bourgogne (France). 31 January 2019.
- [10] **Groupes d'Artin de type sphérique à commensurabilité près**, *Algebra and Geometry seminar*, Université de Caen (France). 15 January 2019.
- [9] **The complex of irreducible parabolic subgroups of Artin-Tits groups of spherical type**, *Oberseminar Groups and Geometry*, Universität Bielefeld (Germany). 6 June 2018.
- [8] **Parabolic subgroups of Artin-Tits groups**, *Group theory seminar*, Universidad Autónoma de Madrid (Spain). 12 April 2018.
- [7] **Curves in a surface and parabolic subgroups of Artin-Tits groups**, *Algebra/Topology seminar*, University of Copenhagen (Denmark). 11 January 2018.
- [6] **Dictionnaire: Courbes/Sous-groupes paraboliques**, *Geometry PhD students seminar*, Université de Rennes 1 (France). 16 November 2017.
- [5] **Analogie entre courbes d'une surface et sous-groupes paraboliques d'un groupe d'Artin-Tits**, *Geometry in Dynamical Systems seminars*, Université de Bourgogne (France). 9 November 2017.
- [4] **On the genericity of pseudo-Anosov elements in the mapping class group of a surface**, *Junior Geometry and Topology Seminar*, University of Warwick (United Kingdom). 12 June 2017.

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- [3] **Standardisateur minimal d'un sous-groupe parabolique d'un groupe d'Artin-Tits**, *Analytic geometry seminar*, Université de Rennes 1 (France). 12 January 2017.
- [2] **Deux algorithmes pour standardiser une courbe dans D_n** , *Geometry PhD students seminar*, Université de Rennes 1 (France). 24 November 2016.
- [1] **Algorithmes dans les groupes de tresses**, *Geometry PhD students seminar*, Université de Rennes 1 (France). 22 October 2015.

Advances courses (lecturer)

Workshops

- [1] **Women in SAGE-Nigeria**, *Group leader for the Group Theory session*, University of Ibadan (Nigeria) - Online. 12-16 September 2022.

Talks in pre-doctoral workshops

- [1] **Árboles y grupos**, *Escuela de Teoría Geométrica de Grupos*, Centro de Ciencias Matemáticas of UNAM in Morelia, Michoacán (Mexico) - Online. 25-29 July 2022.

Community Outreach

Mathematics

- [5] **Talk: Las trenzas en criptografía: Enreden sus secretos**, *Interdisciplinary event "Mujeres en la Ciencia"* (Online), Universidad del Sinú (Colombia). 13 May 2022.
- [4] **Talk: Trenzas matemáticas: Moviendo puntos y mezclando cuerdas**, *Math popularitation event "DivulgaMat"* (Online), Universidad del Cauca (Colombia). 15 March 2021.
- [3] **Blog post: Un problema que llevaba 20 años abierto (II): La intersección de subgrupos parabólicos**, *Spanish Math blog "Gaussianos"*, 29 September 2020, <https://www.gaussianos.com/un-problema-que-llevaba-20-anos-abierto-ii-la-interseccion-de-subgrupos-parabolicos/>.
- [2] **Blog post: Un problema que llevaba 20 años abierto (I): Grupos de trenzas y grupos de Artin**, *Spanish Math blog "Gaussianos"*, 24 September 2020, <https://www.gaussianos.com/un-problema-que-llevaba-20-anos-abierto-i-grupos-de-trenzas-y-grupos-de-artin/>.
- [1] **Talk: Mélanger des fluides avec de tresses**, *5 Minutes Lebesgue*, The Henri Lebesgue Center of Mathematics (France). 5 December 2017, <https://www.lebesgue.fr/video/5min/cumplido>.

Women and Mathematics

- [9] **Talk: Mujer y matemáticas**, Ateneo de Jerez (Spain). 20 Mayo 2022.
- [8] **Round table to commemorate 12th May**, Online – Universidad de Zaragoza (Spain). 12 May 2022.
- [7] **Talk: Mathematics will make you free**, *Geeky Latinas - English Program*, Online. 13 January 2022, <https://www.geekylatinas.com>.

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- [6] **Round table: Ciencia, investigación y salud**, *Forum "Andalucía en femenino"*, Online – Diario ABC (Spain). 5 October 2021, <https://www.andaluciaenfemenino.es/encuentros/5-octubre/>.
- [5] **Round table: Mujeres y Ciencia STEM**, *Event for high-school students*, Online – Consejo Social de la Universidad de Sevilla (Spain). 20 May 2021.
- [4] **Talk: Ruth Charney: Nuevas herramientas geométricas para entender la teoría de grupos**, *Celebrating Women in Mathematics*, Online – Universidad Complutense de Madrid (Spain). 12 May 2021.
- [3] **Talk for high-school students on the International Day of Women and Girls in Science**, IES Francisco Pacheco, Sanlúcar de Barrameda, Cádiz (Spain). 11 Febrero 2021.
- [2] **Talk: Mi experiencia como mujer y matemática**, IES Medina Azahara, Cordova (Spain). 27 February 2018.
- [1] **Talk: Mujeres matemáticas en Andalucía**, *Ciclo de conferencias "Mujeres y ciencia"*, IES Blas Infante, Cordova (Spain). 26 February 2018.

Other activities

- [2] **Member of committee: Concurso de Ciencia Joven**, *Ateneo de Jerez (Spain)*, 2022.
- [1] **Talk: Estudiar lo que te gusta (Study what you like)**, *2º Forum BeReady*, Online/ Casa ABC de Sevilla. 4 February 2021.
https://sevilla.abc.es/andalucia/sevi-maria-cumplido-no-concibo-estudie-carrera-porque-tenga-mas-salidas-profesionales-202102041653_noticia.html

Research projects (as a researcher)

- 01.09.2021 - **PID2020-117971GB-C21**, *Métodos homotópicos y de teoría de grupos en topología*, Plan Estatal 2017-2020 Generación Conocimiento - Proyectos I+D+i, Spain.
Principal investigator: Fernando Muro Jiménez
- 05.10.2021 - **P20_01109**, *Homotopía y Grupos*, PAIDI 2020: Proyectos I+D+i, Juan de Andalucía, Spain.
Principal investigator: Fernando Muro Jiménez
- 15.12.2020 - **Los Derechos de las Mujeres en la Sociedad Digital**, *Programa de Microproyectos de investigación*, Unidad de Excelencia de Investigación "Sociedad Digital: Seguridad y Protección de Derechos", Universidad de Granada (Spain).
Principal Investigator: Tasia Aránguez Sánchez
- 01.02.2020 - **US-1263032**, *Grupos y Topología*, Proyectos I+D+i FEDER Andalucía 2014-2020, Spain.
Principal investigator: Fernando Muro Jiménez
- 01.01.2017 - **MTM2016-76453-C2-1-P**, *Retos transversales en Teoría de Homotopía, nudos y grupos*, Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia, Spain.
Principal investigators: Juan González-Meneses López and Fernando Muro Jiménez

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01.01.2014 - **MTM2013-44233-P**, *Trenzas: Nudos, Grupos de Garside y Mapping Class Groups*,
31.12.2016 Plan Estatal 2013-2016 Excelencia - Proyectos I+D, Spain.
Principal investigator: Juan González-Meneses López

Organization of research events

12.12.2022 - **II Joint meeting of Argentinian and Spanish Mathematical Societies**, *Special Session in conference: Combinatorial and geometrical methods in group theory*,
16.12.2022 Ronda (Spain).
Organizer.

14.06.2021 - **V Joint meeting of Mexican and Spanish Mathematical Societies**, *Special Session in conference: Artin groups and Mapping Class Groups*, Online – Guanajuato
18.06.2021 (Mexico).
Organizer.

20.05.2019 - **Second BYMAT conference**, *Conference*, Institute of Mathematical Sciences,
24.05.2019 Madrid (Spain).
Member of the scientific committee.

10.07.2017 - **Groups of intermediate growth in Seville**, *Advanced course and workshop*, Uni-
14.07.2017 versidad de Sevilla, Seville (Spain).
Member of the organizing and scientific committees.

Social sciences

21.07.2022 - **II Congreso Internacional Feminismo Digital: Los derechos de las mujeres en la era de Internet (Women rights in the Internet era)**, *Conference*, Online,
22.07.2022 <https://feminismodigital.org/>.
Member of the organizing and academic committees.

1.07.2021 - **I Congreso Internacional Feminismo Digital: Los derechos de las mujeres en la era de Internet (Women rights in the Internet era)**, *Conference*, Online,
2.07.2021 <https://2021.feminismodigital.org/>.
Member of the organizing and academic committees.

Research stays

Mar 2022 UCLA. Los Angeles, USA. 1 week.

Feb-Apr 2022 Brown University. Providence, USA. 3 months.

Aug-Sep 2019 Universidad Nacional Autónoma de México. Oaxaca, Mexico. 1 month.

Jan 2018 University of Copenhagen. Copenhagen, Denmark. 1 week

Nov 2017 Université de Bourgogne. Dijon, France. 1 week

2015-2018 Alternating 6 months at the University of Rennes 1 (France) and 6 months at the University of Seville (Spain) every year, as indicated at the Doctoral Agreement between both Universities.

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Student supervision

Bachelor's thesis

- 16.09.2022 **Marta Naranjo Revidiego**, *Producto libre de grupos: Construcción y utilización de formas normales*, Grado en Matemáticas, Universidad de Sevilla.
- 07.07.2022 **José Gálvez Mateos**, *Introducción a la Teoría de Bass-Serre*, Grado en Matemáticas, Universidad de Sevilla.

Teaching

- 2021–2022 **Álgebra Básica**, *Universidad de Sevilla*, 1º Grado en Matemáticas. 30 hours.
- 2020–2022 **Álgebra Lineal y Geometría**, *Universidad de Sevilla*, 1º Grado en Física.
20 hours in 20/21, 30 hours in 21/22.
- 2020–2021 **Teoría de Códigos y Criptografía**, *Universidad de Sevilla*, Practical exercises (SAGEmath), 3º Grado en Matemáticas. 15 hours.
- 2018–2019 **Mathématiques appliquées à la biologie**, *Université de Bourgogne*, Tutorials, 2 Natural Science. 16 hours.
- 2018–2019 **Techniques de programmation pour les mathématiques**, *Université de Bourgogne*, Practical exercises (Python programming), 2 Sciences et Techniques. 25 hours.
- 2018–2019 **Logique et algèbre 1**, *Université de Bourgogne*, Tutorials, 1 Sciences et Techniques. 26 hours.
- 2017–2018 **Algèbre III**, *Université de Rennes 2*, Tutorials, 2 MIASHS (Applied Mathematics and Computer Science to Social and Human Sciences). 48 hours..
- 2016–2018 **Programmation scientifique**, *Université de Rennes 1*, Practical exercises (C programming), 1 Master in Cryptography. 36 hours (18 each year).
- 2016–2017 **Outils mathématiques 1**, *Université de Rennes 1*, Tutorials, 1 Physics/Chemistry. 52 hours.

Awards

- 2020 **Vicent Caselles Mathematical Research Award** granted by the Royal Spanish Mathematical Society (RSME) and the BBVA Foundation.
- 2019 Second prize for the **best doctoral thesis** of the University of Rennes in Mathematics, Sciences and Technology of Information and Communication, granted by Fondation Rennes 1.
- 2017 Award for **best poster** at XXIV *Encuentro de Topología* in Bilbao (Spain), granted by the Spanish Topology Network.

Languages

Spanish, *Mother tongue*.

- 2021–2022 **Basic Japanese A1.1**, *Instituto de Idiomas de la Universidad de Sevilla*.
- 2015 **English B2, First Certificate in English**, *Cambridge University*.
- 2014 **Advanced French (DEL F B2)**, *CIEP*.

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- 2007-2011 **Advanced Italian (B2 level)**, *Escuela Oficial de Idiomas de Córdoba*.
2008-2010 **Intermediate French (B1 level)**, *Escuela Oficial de Idiomas de Córdoba*.

Software

Curves&Braids, a C++ programme to draw curves, apply braids and compute its minimal standardizer..

https://maria.perso.math.cnrs.fr/software_en.html

Miscellaneous

- 2020 Juan de la Cierva Formación Fellowship on ICMAT (not taken).
2015 – 2016 Mobility programme Mérimée. French Embassy in Spain/ Spanish Ministry of Education.
2014-2015 MEC collaboration grant in Algebra department (Universidad de Sevilla).
2014 IMUS Graduate Research Assistantship.
2013–2014 Erasmus Mobility Grant in University of Paris VI.

2010 Spanish Mathematics Olympiad : second prize in Córdoba and participation in national olympiad in Valladolid
2006 Secondary Mathematics Olympiad: winner of the regional olympiad (Andalusia) and participant of national one in Villafranca de los Barros