Joaquín Pérez

Last update: April 1, 2024

Personal Data

Place and Date of Birth:	Tarifa, Cádiz (Spain) | November 14, 1966
School address:	Departamento de Geometría y Topología Facultad de Ciencias, Universidad de Granada Campus Fuentenueva, 18071 Granada (Spain)
Phone:	(34) 958 243396
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ORCID ID:	0000-0003-1877-8884
Google Scholar:	scholar.google.com/citations?user=GK5bCXQAAAAJ&hl=es

Education

March 1996	Doctorado en Matemáticas (Ph.D. Mathematics), **University of Granada** Thesis: "Superficies minimales en $\mathbb{R}^3$" (Minimal surfaces in $\mathbb{R}^3$) Advisor: Prof. Antonio Ros
July 1989	Examen de Grado - Tesina (M.S. Mathematics), **University of Granada** Little thesis: "La aplicación de Gauss de las superficies mínimas en $\mathbb{R}^3$" (The Gauss map of minimal surfaces in $\mathbb{R}^3$) Advisor: Prof. Antonio Ros
July 1989	Licenciatura en Ciencias Matemáticas (B.A. Mathematics) **University of Granada**
June 1984	B. Sc. at Instituto Mixto no 2, Algeciras (Cádiz)

Research areas

Differential Geometry • Geometric Analysis • Minimal surfaces • Surfaces with constant mean curvature • Isoperimetric problem

Languages

Spanish:	Mothertongue
English:	Fluent

Computer Skills

Basic Knowledge:	HTML, Linux, ubuntu, 3D Studio, CorelDraw, Excel
Intermediate Knowledge:	LaTeX, Word, Open Office, WordPress, Wolfram Mathematica, IPE, Surface Evolver

Professional Experience

Teaching / Research positions

March 7, 2007 - Present	Catedrático de Universidad (Full Professor) Department of Geometry and Topology, University of Granada (UGR)
February 20, 1998 – March 6, 2007	Profesor Titular de Universidad (Associate Professor) Department of Geometry and Topology, UGR
April 25, 1997 – February 19, 1998	Profesor Titular Interino de Universidad (Assistant Professor) Department of Geometry and Topology, UGR
October 1, 1996 – April 24, 1997	Profesor Asociado Tipo III (Senior Lecturer with Ph. D. Thesis) Department of Geometry and Topology, UGR
October 1, 1991 – September 30, 1996	Profesor Asociado Tipo II (Senior Lecturer without Ph. D. Thesis) Department of Geometry and Topology, UGR
October 1, 1989 – September 30, 1991	Profesor Asociado Tipo I (Lecturer) Department of Geometry and Topology, UGR

Management positions

2022 –	Member of the Scientific Advisory Board of the Banff International Research Station (BIRS)
2020 – 2024	Individual member Delegate of the Council of the European Mathematical Society
October 2015 – December 2023	Director of the Mathematics Research Institute IMAG University of Granada
2014 – 2015	Member of the Management Board of the International Excellence Campus GENIL (Granada Excellence Network of Innovation Laboratories)
2013 – 2021	Member of the International Relations Commission of RSME
June 2012 – March 2013	Commissioner of the Mathematics exhibition IMAGINARY-RSME Mathematics Institute Oberwolfach (Germany) - RSME - Parque de las Ciencias de Granada
2011-2014	Coordinator in Spain of the French-Spanish Network on Geometric Analysis (members: CNRS, Université Marné-la-Vallée, Université Paris est Creteil val de Marne, Université François-Rabelaise Tours, Université de Bretagne Occidentale Brest, Universidad de Granada, Universidad de Murcia, Universidad de Valencia, CSIC).
2010	Director of the RSME-Santalo Summer School 2010 on Geometric Analysis (MIGS-C6-0384 – CONSOLIDER I-MATH)
2008 – 2011	Member of the Platform Committee MIGS (Mathematics International Graduate School) of the research project Consolider i-MATH

Editorial Boards

March 2022 - Present	Editorial Board of the Springer Nature - RSME series
January 2021 – March 2022	General Editor of the Spanish Royal Mathematical Society

Evaluation Service

2023	Evaluator of research projects in Differential Geometry for the Swiss National Science Foundation
2023	Evaluator of research projects in Differential Geometry for the Spanish Research Agency
2023	Evaluator for the Foundation Princesa de Girona Awards
2022	Evaluator for the Hiring Committee of the Department of Mathematics of the University of Texas at Dallas (UTD)
2021	President of the Jury for the RSME medals
2021	President of the Jury for the BBVA Foundation - RSME Vicent Caselles Prize
2019	Evaluator of research projects in Differential Geometry for the Spanish Research Agency
2019	Evaluator of research projects in Differential Geometry for the Swiss National Science Foundation
2015	Evaluator of research projects in Differential Geometry for the National Institutes of Sciences and Technology (INCT) Program CNPq (Brazil)
2014	Evaluator in hiring processes for professors at Greek Universities APELLA SYSTEM (Greece)
2014	Evaluator of research projects of the EPSRC (Engineering and Physical Sciences Research Council, United Kingdom)
2008	Evaluator of research projects in Geometry and Topology for the National Plan of Mathematics, Ministry of Science and Education

Referee for the following Journals:

Acta Mathematica
Advances in Mathematics
American Journal of Mathematics
Annali della Scuola Normale Superiore di Pisa
Annals of Mathematics
Archiv der Mathematik
Bulletin of the London Mathematical Society
Calculus of Variations and PDE's
Commentarii Mathematici Helvetici
Communications in Analysis and Geometry
Comptes Rendus Mathematique
Duke Mathematical Journal
Geometriae Dedicata
Geometry and Topology
Inventiones Mathematicae
Journal of the Americal Mathematical Society
Journal of Differential Geometry
Journal of Geometric Analysis
Journal of Geometry and Physics
Illinois Journal of Mathematics
Math. Review Letters
Mathematische Zeitschrift
Proceedings of the American Mathematical Society
Transactions of the American Mathematical Society
Revista Matemática Complutense
Revista Matemática Iberoamericana

Publications

1993

1. Joaquín Pérez & Antonio Ros, *Some uniqueness and nonexistence theorems for embedded minimal surfaces,* Mathematische Annalen, vol. 295 (1993) 513–525.

1996

2. Joaquín Pérez & Antonio Ros, *Properly embedded minimal surfaces with finite total curvature,* in Geometry and Topology of Submanifolds VIII, Proceedings of the 1995 Nordfjordeid Conference, Norway, ISBN 981-02-2776-0 (1996) 280–281.

3. Joaquín Pérez & Antonio Ros, *The space of properly embedded minimal surfaces with finite total curvature,* Indiana Univ. Math. J., vol. 45 (1996) 177-204.

4. Joaquín Pérez, *Superficies minimales en* $\mathbb{R}^3$, PhD Thesis, University of Granada (1996).

1997

5. Joaquín Pérez, *On singly-periodic minimal surfaces with planar ends,* Transactions of the AMS, vol. 349, no. 6 (1997) 2371-2389.

1998

6. Joaquín Pérez, *Riemann bilinear relations on minimal surfaces,* Mathematische Annalen, vol. 310, no. 2 (1998) 307-332.

7. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Uniquenesss of the Riemann minimal examples,* Inventiones Mathematicae, vol. 133, no. 1 (1998) 107-132.

8. Joaquín Pérez, *Strong rigidity and periodic minimal surfaces,* in Proceedings of the 1st International Meeting on Geometry and Topology (Editors A. Pereira do Vale & R. Pinto), Depósito Legal 129516/98, Braga, Portugal (1998) 169–174.

1999

9. Joaquín Pérez, *A rigidity theorem for periodic minimal surfaces,* Communications in Analysis and Geometry, vol. 7, no. 1 (1999) 95-104.

10. Joaquín Pérez & Antonio Ros, *The space of complete inimal surfaces with finite total curvature as lagrangian submanifold,* Transactions of the AMS, vol. 351, no. 10 (1999) 3935-3952.

2001

11. Laurent Hauswirth, Joaquín Pérez & Pascal Romon, *Embedded minimal ends of finite type,* Transactions of the AMS, vol. 353, no. 4 (2001) 1335-1370.

2002

12. Joaquín Pérez & Antonio Ros, *Properly embedded minimal surfaces with finite total curvature,* in The Global Theory of minimal surfaces in flat spaces, Lecture Notes in Math, Springer-Verlag, vol. 1775 (2002) 15-66.

13. Joaquín Pérez & Antonio Ros, *Properly embedded minimal annuli bounded by a convex curve,* Journal of the Institute of Mathematics of Jussieu, vol. 1, no. 2 (2002) 293-305.

2003

14. Francisco J. López & Joaquín Pérez, *Parabolicity and Gauss map of minimal surfaces,* Indiana University Math Journal, vol. 4, no. 52 (2003) 1017-1026.

15. Francisco Martín & Joaquín Pérez, *Superficies minimales foliadas por circunferencias: los ejemplos de Riemann,* Gaceta de la RSME, vol. 6, no. 3 (2003) 571-596.

2004

16. Laurent Hauswirth, Joaquín Pérez, Pascal Romon & Antonio Ros, *The periodic isoperimetric problem,* Transactions of the AMS, vol. 356 (2004) 2025-2047.

17. William H. Meeks III, Joaquín Pérez & Antonio Ros, *The geometry of minimal surfaces of finite genus I; curvature estimates and quasiperiodicity,* Journal of Differential Geometry, vol. 66, no. 1 (2004) 1-45.

18. William H. Meeks III, Joaquín Pérez & Antonio Ros, *The geometry of minimal surfaces of finite genus II; nonexistence of one limit end examples,* Inventiones Mathematicae, vol. 158, no. 3 (2004) 323-341.

19. William H. Meeks III & Joaquín Pérez, *Conformal properties in classical minimal surface theory,* in *Surveys in Differential Geometry IX, Eigenvalues of the Laplacian and other geometric operators,* International Press (2004) 275-336.

2005

20. Joaquín Pérez, *Parabolicity and minimal surfaces,* in *The Global Theory of Minimal Surfaces,* Clay Mathematics Proceedings, vol. 2 (2005) 163-174, ISSN: 1534-6455, ISBN: 0-8218-3587-4.
21. Joaquín Pérez, *Uniqueness of the Riemann minimal surfaces,* in *The Global Theory of Minimal Surfaces,* Clay Mathematics Proceedings, vol. 2 (2005) 597-610, ISSN: 1534-6455, ISBN: 0-8218-3587-4.
22. Joaquín Pérez, Magdalena Rodríguez & Martin Traizet, *The classification of doubly periodic minimal tori with parallel ends,* Journal of Differential Geometry, vol. 69, no. 3 (2005) 523-577.
23. Joaquín Pérez, *Limits by rescalings of minimal surfaces, minimal laminations, curvature decay and local pictures,* notes of course in the Workshop *Moduli spaces of properly embedded minimal surfaces,* American Institute of Mathematics (2005)

2006

24. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Liouville properties for embedded minimal surfaces,* Communications in Analysis and Geometry, vol. 14, no. 4 (2006) 703-723.

2007

25. Joaquín Pérez & Martin Traizet, *The classification of singly periodic minimal surfaces with genus zero and Scherk type ends,* Transactions of the AMS, vol. 359, no. 3 (2007) 965-990.
26. Joaquín Pérez, *Stable minimal surfaces bounded by a straight line,* Calculus of Variations and Partial Differential Equations, vol. 29, no. 2 (2007) 267-279.

2008

27. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Stable constant mean curvature surfaces,* in *Handbook of Geometric Analysis,* no. 1, International Press (2008) 301-380. ISBN: 978-1-57146-130-8.

2009

28. William H. Meeks III & Joaquín Pérez, *Properly embedded minimal planar domains with infinite topology are Riemann minimal examples,* in *Current Developments in Mathematics 2008,* International Press (2009) 281-346. ISBN: 978-1-57146-139-1.

2010

29. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Limit leaves of an H-lamination are stable,* Journal of Differential Geometry, vol. 84, no. 1 (2010) 179-189.

2011

30. José Manzano, Joaquín Pérez & Magdalena Rodríguez, *Parabolic stable surfaces with constant mean curvature,* Calculus of Variations and Partial Differential Equations, vol. 42 (2011) 137-152.
31. William H. Meeks III & Joaquín Pérez, *The classical theory of minimal surfaces,* Bulletin of the AMS, vol. 48, no. 3 (2011) 325-407.
32. Joaquín Pérez, *Sinh-Gordon type equations for CMC surfaces,* Florentino García Santos: In memoriam, Universidad de Granada (2011) 135–145.

2012

33. William H. Meeks III & Joaquín Pérez, *A survey on classical minimal surface theory,* University Lecture Series (AMS), vol. 60 (2012) 182 pages, ISBN: 978-0-8218-6912-3.
34. William H. Meeks III & Joaquín Pérez, *Constant mean curvature surfaces in metric Lie groups,* in *Geometric Analysis: Partial Differential Equations and surfaces,* Contemporary Mathematics (AMS), vol. 570 (2012) 25-110.

2014

35. William H. Meeks III, Pablo Mira, Joaquín Pérez & Antonio Ros, *Isoperimetric domains of large volume in homogeneous three-manifolds,* Advances in Mathematics, vol. 264 (2014) 546-592.

2015

36. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Properly embedded minimal planar domains,* Annals of Mathematics, vol. 181, no. 2 (2015) 473-546.

2016

37. William H. Meeks III & Joaquín Pérez, *CMC foliations of closed manifolds,* The Journal of Geometric Analysis, vol. 26, no. 3 (2016) 1647-1677.
38. William H. Meeks III & Joaquín Pérez & Antonio Ros, *Local removable singularity theorems for minimal laminations,* Journal of Differential Geometry, vol. 103, no. 2 (2016) 319-362.
39. William H. Meeks III, Joaquín Pérez & Antonio Ros, *The Dynamics Theorem for properly embedded minimal surfaces,* Mathematische Annalen, vol. 365 (2016) 1069-1089.
40. William H. Meeks III & Joaquín Pérez, *The Riemann minimal examples,* in *The Legacy of Bernhard Riemann after one hundred and fifty years,* Advanced Lectures in Mathematics, Higher Education Press (Beijing) and International Press (Boston) vol. 35 (2016) 417-457. ISBN: 978-704-031875-3.
41. William H. Meeks III, Joaquín Pérez & Antonio Ros, *The classification of CMC foliations of $\mathbb{R}^3$ and $\mathbb{S}^3$ with countably many singularities,* American Journal of Mathematics, vol. 138, no. 5 (2016) 1347-1382.
42. William H. Meeks III, Joaquín Pérez & Giuseppe Tinaglia, *Constant mean curvature surfaces,* in *Surveys in Differential Geometry XXI,* International Press (2016) 179-287. ISBN: 9781571463227.

2017

43. Joaquín Pérez, *Una nueva edad de oro de las superficies mínimas,* Gaceta de la RSME, vol. 20, no. 5 (2017) 193-211.
44. Joaquín Pérez, *A new golden age of minimal surfaces,* Notices of the AMS, vol. 64, no. 4 (2017) 347-358. Translated to Chinese in Mathematics, Science, History, and Culture (Vol. 15, 2018).
45. William H. Meeks III & Joaquín Pérez, *Finite type annular ends for harmonic functions,* Mathematische Annalen, vol. 367, no. 3 (2017) 1047-1056. DOI:10.1007/s00208-016-1407-0.
46. William H. Meeks III, Pablo Mira & Joaquín Pérez, *Embeddedness of spheres in homogeneous three-manifolds,* International Mathematics Research Notices, vol. 2017, no. 15 (2017) 4796–4813. DOI: 10.1093/imrn/rnw159.
47. William H. Meeks III & Joaquín Pérez, *Finite topology minimal surfaces in homogeneous three-manifolds,* Advances in Mathematics, vol. 312 (2017) 185-197.

2018

48. William H. Meeks III, Joaquín Pérez & Antonio Ros, *The local picture theorem on the scale of topology,* Journal of Differential Geometry, vol. 109, no. 3 (2018) 509-565.

2019

49. William H. Meeks III & Joaquín Pérez, *Embedded minimal surfaces of finite topology,* Journal für die reine und angewandte Mathematik (Journal de Crelle), vol. 753 (2019) 159-192. DOI: 10.1515/crelle-2017-0008.

50. William H. Meeks III, Pablo Mira & Joaquín Pérez, *The geometry of stable minimal surfaces in metric Lie groups,* Transactions of the Amer. Math. Soc., vol. 372, no. 2 (2019) 1023-1056. DOI: https://doi.org/10.1090/tran/7634.

51. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Bounds on the topology and index of classical minimal surfaces,* Acta Mathematica, vol. 223 (2019) 113–149. DOI: 10.4310/ACTA.2019.v223.n1.a2

2020

52. William H. Meeks III, Joaquín Pérez & Antonio Ros, *Structure theorems for singular minimal laminations,* Journal für die reine und angewandte Mathematik (Journal de Crelle), vol. 763 (2020) 271-–312. DOI: 10.1515/crelle-2018-0036.

2021

53. William H. Meeks III, Pablo Mira, Joaquín Pérez & Antonio Ros, *Constant mean curvature spheres in homogeneous three-manifolds.* Inventiones Mathematicae, vol. 224 no. 1 (2021) 147–244. DOI: 10.1007/s00222-020-01008-y.

54. William H. Meeks III, Joaquín Pérez & Antonio Ros, *The embedded Calabi-Yau conjecture for finite genus.* Duke Mathematical Journal, vol. 170 no. 13 (2021) 2891–2956. DOI: 10.1215/00127094-2020-0087.

2022

55. William H. Meeks III, Pablo Mira, Joaquín Pérez & Antonio Ros, *Constant mean curvature spheres in homogeneous three-spheres.* Journal of Differential Geometry, vol. 120 no. 2 (2022) 307–343. DOI: 10.4310/jdg/1645207520.

2023

56. David Moya & Joaquín Pérez, *Generalized Henneberg stable minimal surfaces.* Results in Mathematics, https://doi.org/10.1007/s00025-022-01831-0.

57. William H. Meeks III & Joaquín Pérez, *Hierarchy structures in finite index CMC surfaces.* Advances in Calculus of Variations, https://doi.org/10.1515/acv-2022-0113.

58. William H. Meeks III & Joaquín Pérez, *Geometry of CMC surfaces of finite index.* Advanced Nonlinear Studies, , vol. 23, no. 1 (2023) pp. 20220063. https://doi.org/10.1515/ans-2022-0063

59. Pablo Mira & Joaquín Pérez, *Uniqueness of constant mean curvature spheres,* New Trends in Geometric Analysis, Spanish Network of Geometric Analysis 2007-2021. RSME-Springer Nature, vol. 10 (2023) 365–393. https://doi.org/10.1007/978-3-031-39916-9

2024

60. William H. Meeks III & Joaquín Pérez, *Geometry of branched minimal surfaces of finite index,* Advanced Nonlinear Studies, 2024. https://doi.org/10.1515/ans-2023-0118

In preparation

61. José M. Espinar, José A. Gálvez & Joaquín Pérez, *New closed embedded minimal surfaces in* $\mathbb{S}^3$.

Professional Presentations

1995

1. Speaker at the *Conference on Pure Differential Geometry,* Nordfjordeid (Norway). Title: Properly embedded minimal surfaces with finite total curvature.

1996

2. Speaker at the *International Conference on Differential Geometry,* IMPA (Rio de Janeiro, Brazil). Title: One-ended minimal surfaces with finite total curvature and convex planar boundary.
3. Speaker at the Geometry Seminar of the University of Massachusetts at Amherst (three talks). Titles: The moduli space near a nondegenerate minimal surface / The lagrangian second fundamental form for moduli space / One-ended minimal surfaces with convex planar boundary.

1997

4. Speaker at the *1st International Meeting on Geometry and Topology,* Braga (Portugal). Title: Strong rigidity and periodic minimal surfaces.

1998

5. Speaker at the Geometry Seminar of the University of Massachusetts at Amherst. Title: Uniqueness of the Riemann minimal examples.
6. Speaker at the conference *Aspects Geometriques et Analytiques des problemas a la courbure,* Marseille-Luminy (France). Title: Minimal surfaces of finite type end helicoidal ends.
7. Speaker at the Geometry Seminar of the University of Granada. Title: Unicidad de los ejemplos de Riemann I (Uniqueness of the Riemann minimal examples I). October 8.
8. Speaker at the Geometry Seminar of the University of Granada (two talks). Titles: Unicidad de los ejemplos de Riemann II (Uniqueness of the Riemann minimal examples II). October 15.

1999

9. Speaker at the Geometry Seminar of the University of Granada. Title: Comportamiento asintótico de las superficies minimales embebidas de tipo finito (asymptotic behavior of embedded minimal surfaces of finite type). May 13.
10. Speaker at the conference *Global theory of minimal surfaces in flat spaces,* Martina Franca (Italy). Title: Asymptotic behavior of complete embedded minimal surfaces of finite type.

2001

11. Speaker at the Geometry Seminar of the University of Granada. Title: Parabolicidad y superficies minimales (parabolicity and minimal surfaces). June 19.
12. Speaker at the conference *Clay Mathematical Institute Summer School on Minimal Surfaces,* MSRI-Berkeley (California, USA). Title: Parabolic minimal surfaces.
13. Speaker at the conference *Clay Mathematical Institute Summer School on Minimal Surfaces,* MSRI-Berkeley (California, USA). Title: Uniqueness of the Riemann minimal surfaces.

2002

14. Speaker at the Geometry Seminar of the Université Paris VII. Title: Parabolicity and Gauss map of minimal surfaces.

2004

15. Speaker at the Geometry Seminar of the University of Granada. Title: Clasificación de los toros minimales doblemente periódicos con finales paralelos (classification of doubly periodic minimal tori with parallel ends). May 25.
16. Speaker at the Geometry Seminar of the Institut de Mathematiques de Jussieu, Paris. Title: Doubly periodic minimal tori with parallel ends.

2005

17. Plenary speaker at the conference *Moduli spaces of properly embedded minimals surfaces,* Palo Alto (California, USA). Title: Rescaling methods on minimal surfaces: minimal laminations, curvature decay and local pictures.
18. Speaker at the conference *Moduli spaces of properly embedded minimals surfaces,* Palo Alto (California, USA). Title: Singly periodic minimal surfaces with genus zero and Scherk-type ends.
19. Speaker at the *Geometry Day,* University of Granada. Title: Superficies mínimas estables con borde una recta (stable minimal surfaces whose boundary is a straight line). December 20.

2006

20. Speaker at the Geometry Seminar of the Universidad Autónoma de Barcelona. Title: Superficies mínimas en $\mathbb{R}^3$: algunos problemas actuales (Current open problems in minimal surface theory).

2007

21. Speaker at the conference *International Congress on minimal and constant mean curvature surfaces,* Buzios (Brazil). Title: Uniqueness of the Riemann minimal examples.
22. Speaker at the Geometry Seminar of the University of Granada. Title: La ecuación de Korteweg-de Vries y la clasificación de los ejemplos de Riemann (Korteweg-de Vries equation and classification of the Riemann minimal examples). October 30.
23. Speaker at the Advanced School *The Poincaré Conjecture: Ricci flow and applications* (IMATH-CONSOLIDER), University of Granada. Title: Extinción en tiempo finito del flujo de Ricci (Finite time extinction of the Ricci flow).
24. Speaker at the Geometry Seminar of the University of Granada. Title: Clasificación de los ejemplos de Riemann I (classificacion of the Riemann minimal examples I). November 2.
25. Speaker at the Geometry Seminar of the University of Granada. Title: Clasificación de los ejemplos de Riemann II (classificacion of the Riemann minimal examples II). November 11.

2008

26. Speaker at the conference *Minimal and CMC surfaces: Research in Pairs,* Kloster Schöntal (Germany). Title: KdV equation and Riemann minimal examples.
27. Speaker at the conference *Workshop on recent advances in Geometry and Topology of submanifolds,* Roma (Italy). Title: The Stable Limit Leaf Theorem.
28. Speaker at the conference *Current Developments in Mathematics,* Harvard University (USA). Title: Classification of properly embedded minimal planar domains: the Shiffman function and the KdV equation.

2009

29. Speaker at the conference *Arbeitsgemeinschaft: minimal surfaces,* Mathematisches Forschunsinstitut Oberwolfach (Germany). Title: Embedded minimal surfaces with finite topology.
30. Speaker at the Geometry Seminar of the University of Granada. Title: Finales mínimos anulares de curvatura total infinita (embedded annular minimal ends with infinite total curvature). October 28.
31. Three-hour course at the conference *Escuela de Analisis Geométrico,* Universidad de Granada (Spain). Title: Superficies mínimas y problema isoperimétrico (minimal surfaces and isoperimetric problem).

2010

32. Speaker at the conference *Algebraic, Geometric and Analytic aspects of surface theory,* Buzios (Brazil). Title: Nonnegative Schrödinger operators on parabolic manifolds.
33. Speaker at the Geometry Seminar of the University of Granada. Title: Superficies con CMC en grupos de Lie métricos tridimensionales I (CMC surfaces in three-dimensional metic Lie groups I). November 17.
34. Speaker at the Geometry Seminar of the University of Granada. Title: Superficies con CMC en grupos de Lie métricos tridimensionales II (CMC surfaces in three-dimensional metic Lie groups II). December 1.

2011

35. Speaker at the Geometry Seminar of the University of Granada. Title: Superficies con CMC en grupos de Lie métricos tridimensionales III (CMC surfaces in three-dimensional metic Lie groups III). February 9.
36. Speaker at the conference *Spanish-Japanese Workshop on Differential Geometry,* Universidad de Granada (Spain). Title: CMC spheres in three-dimensional metric Lie groups.
37. Three-hour course at the International Summer School *Minimal and Constant Mean Curvature Surfaces,* Universidad de Sevilla (Spain). Title: CMC surfaces in metric Lie groups.
38. Speaker at the conference *Congreso de Clausura del Proyecto i-MATH,* CIEM Castro Urdiales (Spain). Title: Actividades i-MATH enfocadas a jóvenes investigadores: Escuela Santaló de la RSME 2010 y EU-Young Mobile Workshop 2011 (i-MATH events focused on young reseachers: Santaló-RSME summer school 2010 and EU-Young Mobile workshop 2011).

2012

39. Speaker at the Geometric Analysis session in the international conference *II Encuentro conjunto RSME-SMM,* Torremolinos (Spain). Title: Surfaces in homogeneous manifolds.
40. Speaker at the Geometry Seminar of the University of Warwick (UK). Title: CMC spheres in three-dimensional metric Lie groups.
41. Speaker at the Stanford University Colloquium (USA). Title: Classification of constant mean curvature spheres in metric Lie groups.
42. Speaker at the Geometry Seminar of the University of Granada. Title: Superficies mínimas con crecimiento de curvatura cuadrático (minimal surfaces with quadratic decay of curvature). October 19.

2013

43. Speaker at the Geometric Analysis session in the conference *Congreso Bienal RSME 2013,* Santiago de Compostela (Spain). Title: Cheeger constant, critical mean curvature and isoperimetric problem in homogeneous 3-manifolds.
44. Speaker at the Geometry Seminar of the University of Granada. Title: Dominios isoperimétricos con gran volumen en 3-variedades homogéneas (Isoperimetric domains with large volume in simply connected homogeneous 3-manifolds). April 26.
45. Speaker at the conference *Progress in surface theory,* Mathematics Institute Oberwolfach (Germany). Title: Isoperimetric domains with large volume in simply connected homogeneous 3-manifolds.
46. Speaker at the *Conference on submanifolds and Spin Geometry,* Institut Élie Cartan, Lorraine (France). Title: Isoperimetric domains with large volume in simply connected homogeneous 3-manifolds.

47. Speaker at the *Conference on qualitative and geometric aspects of elliptics PDEs,* Centre de Recerca Matematica, Barcelona (Spain). Title: Quadratic decay of curvature on minimal surfaces.

2014

48. Speaker at the conference *2nd Japanese-Spanish Workshop of Differential Geometry,* Tokyo Institute of Technology (Japan). Title: Weak CMC foliations with singularities of $\mathbb{R}^3$.
49. Speaker at the conference *IV workshop de Geometria Diferencial,* Instituto de Matemática da Universidade Federal de Alagoas (Brazil). Title: Foliations with leaves of constant mean curvature.
50. Speaker at the *Warwick-Imperial-Cambridge Geometric Analysis Seminar,* University of Cambridge (UK). Title: CMC foliations of closed manifolds.
51. Plenary speaker at the *5th Iberian Mathematical Meeting,* University of Aveiro (Portugal). Title: Existence of foliations with leaves of constant mean curvature in compact manifolds.

2015

52. Speaker at the conference *Minimal surfaces, Overdeterminated problems and Geometric Analysis, ICTP-CIMPA Research School,* Santiago de Chile. Title: Existence of CMC foliations.
53. Speaker at the conference *30° Coloquio Brasileiro de Matemática,* IMPA (Rio de Janeiro, Brazil). Title: Rescaling by topology and minimal surfaces with finite topology.
54. Speaker at the conference *1st joint Meeting Brazil-Spain in Mathematics,* University of Fortaleza (Brazil). Title: Embedded minimal surfaces: a panoramic view.

2016

55. Speaker at the Geometry Seminar of the University of Granada. Title: Laminaciones mínimas en $\mathbb{R}^3$ y la conjetura de Hoffman-Meeks (minimal laminations and the Hoffman-Meeks conjecture). April 22.
56. Speaker at the Seminar *Topics in Geometric Analysis,* jointly organized by Freie Universität Berlin, Potsdam University and the Max Planck Institute. Title: Minimal laminations in Euclidean three-space.
57. Plenary speaker at the conference *1er Coloquio de Geometría en el Sur+Este,* University of Murcia (Spain). Title: Laminaciones mínimas en $\mathbb{R}^3$ y la conjetura de Hoffman-Meeks (minimal laminations and the Hoffman-Meeks conjecture).
58. Speaker at the conference *Foliations 2016,* Institute of Mathematics at Bedlewo (Poland). Title: Minimal laminations and the Hoffman-Meeks Conjecture.
59. Speaker at the Geometry Seminar of the University of Granada. Title: Stable minimal surfaces in semidirect products. October 28.
60. Speaker at the round table discussion *The future of Mathematical Research in Spain.* Organized by the CEMat (Spanish Committee of Mathematics). Venue of the Royal Academy of Sciences, Madrid. December 19, 2016.

2017

61. Speaker at the Worshop *Minimal surfaces: integrable systems and visualisation,* University College Cork (Ireland). Title: CMC spheres in homogeneous 3-manifolds, II.
62. Speaker a the Geometry Seminar of the Department of Mathematics at King's College London (UK). Title: CMC spheres in homogeneous 3-manifolds.

63. Speaker at the Geometry Seminar of the Department of Mathematics of the University of Santiago de Compostela (Spain). Title: Introducción a las superficies mínimas (Introduction to minimal surface theory, 6 hours).

2018

64. Plenary speaker at the *7th Iberoamerican Congress on Geometry,* Valladolid, Spain. Title: Classification of spheres with constant mean curvature in homogeneous 3-manifolds.
65. Plenary speaker at the ICM2018 Satellite Conference *Modern Trends in Differential Geometry,* São Paulo, Brazil, 23-27 July. Title: Recent advances in minimal surface theory in $\mathbb{R}^3$.
66. Speaker at the Geometry Seminar of the University of Granada. Title: El problema de Calabi-Yau embebido para superficies mínimas de género finito (the embedded Calabi-Yau problem for minimal surfaces of finite genus). October 11.
67. Speaker at the Geometry and Topology Seminar of the University of Málaga (Spain). Title: Superficies mínimas: viejos problemas y nuevos avances (minimal surfaces: old problems and new progress).
68. Invited speaker at the *Workshop on Mean Curvature and Regularity,* Institute for Advanced Study (Princeton USA). Title: The embedded Calabi-Yau problem for minimal surfaces of finite genus.
69. Invited speaker at the *Geometric Analysis Seminar,* MIT (Boston USA). Title: The embedded Calabi-Yau conjecture for embedded minimal surfaces of finite genus.
70. Invited speaker at the *IV Jornadas Doctorales del Programa de Doctorado en Matemáticas,* Universidad de Cádiz. Title: Superficies mínimas en el espacio euclídeo (Minimal surfaces in Euclidean space).

2019

71. Invited speaker at the *University of Málaga.* Title: Películas de jabón y matemáticas (Soap films and Mathematics).
72. Plenary speaker at the Conference *Geometric Analysis, Submanifolds and Geometry of PDE's,* Politecnico di Torino, Italy. Title: Constant mean curvature surfaces of finite index.

2020

73. Invited speaker at the *Milano-Torino Geometry & Analysis Seminar-I* (two talks), Università degli studi di Milano, Italy. Title: Some recent advances on classical minimal surface theory (I+II).

2023

74. Invited speaker at the INDAM meeting *Geometric Analysis and PDE's*, Palazzone in Cortona, Italy. Title: Hierarchy structures in CMC surfaces of finite index.

2024

75. Invited speaker at the *4th International Conference on Surfaces, Analysis, and Numerics in Differential Geometry (1st IMAG-OCAMI Joint Conference on Differential Geometry)*, Takamatsu, Japan. Title: Weak chord-arc estimates for complete branched minimal surfaces of finite index in $\mathbb{R}^3$.
76. Invited speaker at the *Differential Geometry and Geometric Analysis*, Fortaleza, Brazil. Title: Blow-up rates and hierarchy structures in sequences of CMC surfaces with bounded Morse index.

Students

Final Degree Project (TFG) Students

1. Alberto Witt Boutellier, *Introducción a la Geometría Riemanniana,* University of Granada 2016.
2. Roberto Vílchez Viedma, *Geodésicas, valores conjugados e índice de Morse,* University of Granada 2018.
3. Ana Poveda Mena, *Orbifolds y teselaciones,* University of Granada 2019.
4. José Antonio Gómez-Pastrana Valdepeñas, *Una introducción a las superficies mínimas en* $\mathbb{R}^3$*,* University of Granada 2021.
5. Emmanuel Paprota, *Cálculo de Variaciones, puntos conjugados e Índice de Morse,* University of Granada 2021.
6. Jose Manuel García Olcina, *Cartografía y Geometría,* University of Granada 2022.
7. Rubén Conejo Ruiz, *El Teorema de Sard y una introducción a la integración en variedades Riemannianas,* University of Granada 2022.
8. Carmen Atero Durán, *La fórmula de integración en polares en una variedad Riemanniana,.* University of Granada 2023.

Master Thesis (TFM) Students

1. David Moya Hinojosa, *Superficies mínimas y de curvatura media constante en 3-variedades homogéneas,* University of Granada 2019.
2. Andrea Del Prete, *Simply connected homogeneous Riemannian 3-manifolds,* University of Granada 2020.

Ph. D. Students

1. María Magdalena Rodríguez Pérez, *Superficies minimales doblemente periódicas con género uno y finales paralelos,* University of Granada 2005.
2. José Miguel Manzano Prego, *Superficies con curvatura media constante en espacios homogéneos,* University of Granada 2012 (co-advised with Magdalena Rodríguez Pérez).
3. David Moya Hinojosa, *Superficies mínimas: estabilidad y grupos continuos de isometrías,* University of Granada 2023.
4. Diego Alfonso Marín Muñoz (in preparation, co-advised with José María Espinar García).

Postdoctoral Fellows Supervised

1. Filippo Morabito (PhD University of Rome, Italy), 2008.
2. Rami Younes (PhD University of Tours, France), 2008.
3. Hojoo Lee (PhD KIAS, South Korea), 2011-2012.
4. Alvaro Kruger (PhD Universidade Federal do Rio Grande do Sul, Brazil), 2013-2014.
5. Francisco Torralbo (PhD University of Granada), 2013-2014.
6. Çagrı Hacıyusufoglu (PhD University of Kac, Turkey), 2014-2015.
7. Ana Lerma (PhD University of Granada), 2014-15.
8. Alberto Roncoroni (PhD University of Pavia, Italy), 2020-2021.
9. Eduardo Rosinato Longa (PhD University of Sao Paulo, Brazil), 2021-2022.
10. Jesús Castro Infantes (PhD University of Granada), 2022.
11. Ezequiel Rodrigues (PhD Universidade Federal de Minas Gerais, Brazil), 2021-2023.

12. Antonio Luis Martínez Triviño (PhD University of Granada), 2022-2023.
13. David Moya Hinojosa (PhD University of Granada), 2024-2024.

Current Research Support

Jan 1, 2022 – Dec 31, 2025	Title: IMAG–Maria de Maeztu grant Funding source: Agencia Estatal de Investigación /10.13039/501100011033 Code number: CEX2020-001105-M Scientific Director: Joaquín Pérez Total budget: 1.800.000 €
Sep 1, 2021 – Aug 31, 2024	Title: Análisis Geométrico (Geometric Analysis) Funding source: MICINN (Ministry of Science and Innovation of Spain) Code number: PID2020-117868GB-I00 Main researchers: Joaquín Pérez & Antonio Alarcón Number of researchers in the project: 13 Total budget: 231.473 €

Past Research Support (only research grants as PI)

Jan 1, 2020 – March 31, 2023	Title: Superficies y Análisis Geometrico (Surfaces and Geometric Analysis) Funding source: Junta de Andalucía, Unión Europea (Regional Goverment, EU) Code number: P18-FR-4049 Main researchers: Antonio Ros & Joaquín Pérez Number of researchers in the project: 25 Total budget: 113.750 €
Jan 1, 2018 – Sep 30, 2021	Title: Análisis Geométrico (Geometric Analysis) Funding source: MINECO / FEDER (partially supported by the Ministry of Economy and Competitiveness of Spain and the European Union) Code number: MTM2017-89677-P Main researchers: Joaquín Pérez & Antonio Alarcón Number of researchers in the project: 15 Total budget: 139.392 €
Oct 21, 2017 - Oct 20, 2021	Title: Unidad de excelencia IMAG Founding source: Vicerrectorado de Investigación y Transferencia (Vice-Rectorate for Research and Knowledge Transfer), UGR Main researcher: Joaquín Pérez Total budget: 45.000 €
Jan 1, 2015 – Dec 31, 2018	Title: Análisis Geométrico (Geometric Analysis) Funding source: MINECO / FEDER (partially supported by the Ministry of Economy and Competitiveness of Spain and the EU) Code number: MTM2014-52368-P Main researcher: Joaquín Pérez Number of researchers in the project: 16 Total budget: 201.586 €
Jan 1, 2012 – Dec 31, 2015	Title: Análisis Geométrico (Geometric Analysis) Funding source: MINECO / FEDER (partially supported by the Ministry of Economy and Competitiveness of Spain and the EU) Code number: MTM2011-22547 Main researcher: Joaquín Pérez Number of researchers in the project: 17 Total budget: 243.210 €

Honors and Grants

1991	Grant of the International University Menéndez-Pelayo for the summer course *Mathematical Analysis and the problems of Continuum Physics*
1989	Extraordinary award to Graduate Studies in Mathematics (Licenciatura) - University of Granada
1988 - 1989	Collaboration Grant at the Department of Geometry and Topology, University of Granada

Memberships

Spanish Royal Mathematical Society
European Mathematical Society