

Alberto Cerezo Cid

Curriculum Vitae

Education

- 2022-2025 **PhD in Mathematics**, *Universidad de Granada and Universidad de Sevilla*, Spain.
FPI contract, funded by the Spanish Ministry of Science and Innovation.
 - Title of the thesis: **Constant mean curvature annuli with free boundary**.
 - PhD awarded with **cum laude** honors.
 - Advisors: Isabel Fernández Delgado (Universidad de Sevilla) and Pablo Mira Carrillo (Universidad Politécnica de Cartagena).
- 2021-2022 **Master's Degree in Mathematics**, *Universidad de Sevilla*, Spain.
Average mark: 9,72/10 ([Link](#) to academic record).
- 2016-2021 **Double Bachelor's Degree in Mathematics and Physics**, *Universidad de Sevilla*, Spain.
Average marks ([Link](#) to academic records):
 - Mathematics: 9,79/10.
 - Physics: 9,70/10.
- 2014-2016 **Spanish Baccalaureate**, *IES Pepe Ruiz Vela*, Sevilla (Spain). Average mark: 10/10.

Publications and preprints

Publications

- 2025 A. Cerezo, I. Fernández, P. Mira: Free boundary CMC annuli in spherical and hyperbolic balls. *Calc. Var.* **64**, 37, 2025 (arXiv:2403.04595).
- 2025 A. Cerezo, I. Fernández, P. Mira: Annular solutions to the partitioning problem in a ball. *J. Reine Angew. Math* (Crelle's Journal), 2025 (arXiv:2212.07986).

Preprints

- 2025 A. Cerezo: Free boundary minimal annuli in geodesic balls of \mathbb{H}^3 , preprint (2025), arXiv:2502.20303.
- 2025 A. Cerezo: Free boundary saddle disks in the unit ball, preprint (2025), arXiv:2511.02812.
- 2025 A. Cerezo, I. Fernández, P. Mira: Schiffer-Robin ring domains in the 2-sphere, in preparation (2025).

Relevant Experience

- 2022-2024 **Undergraduate instructor** at Universidad de Sevilla (Spain).
 - Delivered **136** hours of instruction.
 - Courses: Introduction to Discrete Mathematics, Discrete Mathematics.
- 2024 **Research stay**, *IMPA*, Rio de Janeiro (Brazil). Advisor: Lucas Ambrozio. Stay funded by the Spanish Ministry of Science and Innovation.
 - Research topic: Min-max theory for minimal and CMC surfaces. Extension to equivariant and free boundary setup.

- 2021-2022 **Introduction to Research grant**, *IMUS*, Sevilla (Spain). Advisor: Isabel Fernández Delgado (Universidad de Sevilla). Paid internship funded by Universidad de Sevilla.
- Research topic: Hopf's problem for Weingarten surfaces in homogeneous spaces.
- 2021 **Grant programme PI3 - IMUS: Introduction to Research**, *IMUS*, Sevilla (Spain). Advisor: Isabel Fernández Delgado (Universidad de Sevilla).
- Research topic: Weierstrass representation.
- 2020-2021 **Collaboration grant**, *Universidad de Sevilla*, Spain. Advisor: Isabel Fernández Delgado (Universidad de Sevilla). Paid internship funded by the Spanish Ministry of Education.
- Research topic: minimal and mean curvature surfaces.
- 2020 **Grant programme Severo Ochoa – ICMAT: Introduction to Research 2020**, *ICMAT*, Madrid (Spain). Advisor: David Martín de Diego (ICMAT).
- Research topic: discrete differential geometry.
- 2019-2020 **Student intern at Geometry and Topology department**, *Universidad de Sevilla*, Spain. Advisors: Isabel Fernández Delgado and Ramón Jesús Flores Díaz (Universidad de Sevilla).
- Research topic: minimal and mean curvature surfaces.

Honors

- 2024 **Awarded talk** at the Lightning Talks session at the 9th European Congress of Mathematics.
- 2021-2022 **Qualified with Honors** in 50% of the courses from the Master's Degree in Mathematics.
- 2021-2022 **Qualified with 9.0 or higher** in 90% of the courses from the Master's Degree in Mathematics.
- 2017-2021 **Qualified with Honors** in 47% of the courses from the Double Bachelor's Degree in Mathematics and Physics.
- 2017-2021 **Qualified with 9.0 or higher** in 97% of the courses from the Double Bachelor's Degree in Mathematics and Physics.
- 2020 **Third prize** in the XXVII International Mathematics Competition for University Students.
- 2016 Baccalaureate awarded with Honors.

Conferences and events

Presented talks

- 2025 **Séminaire de géométrie IMJ-PRG/LAMA** (Paris, France). Title of the talk: [Embedded free boundary CMC and capillary minimal annuli](#).
- 2025 **Second IMAG-OCAMI Joint Conference on Differential Geometry** (Granada, Spain). Title of the talk: [Free boundary minimal and CMC annuli with spherical curvature lines](#).
- 2024 **REAG Young Researchers Meeting** (Santiago de Compostela, Spain). Title of the talk: [Construction of free boundary minimal and CMC annuli in space forms](#).
- 2024 **European Congress of Mathematics** (Seville, Spain). Gave a short talk at the EMS Young Academy session.
- 2024 **European School of Differential Geometry** (Granada, Spain). Presented a poster.
- 2024 **Geometry seminar at Universidade Federal Fluminense** (Niterói, Brazil). Title of the talk: [Construction of free boundary minimal and CMC annuli in space forms](#).
- 2024 **IMPA Geometry seminar** (Rio de Janeiro, Brazil). Title of the talk: [Free boundary minimal and CMC annuli in space forms](#).
- 2023 **Recent advances in the theory of submanifolds**, INDAM (Rome, Italy). Title of the talk: [Embedded free boundary CMC annuli in the unit ball](#).

- 2023 **\mathcal{H} -Workshop 2023**, IMAG (Granada, Spain). Title of the talk: [Embedded free boundary CMC annuli in the unit ball](#).
- 2021 **Grant programme PI3 - IMUS: Introduction to Research**, IMUS (Sevilla, Spain). Gave a short talk about Weierstrass representation for minimal surfaces.

Delivered courses

- 2024 **6-hour mini course at Universidad de Granada** (Spain). Topic of the course: [Introduction to Simon-Smith min-max theory & applications](#).
- 2024 **3-hour mini course at IMPA** (Rio de Janeiro, Brazil). Topic of the course: [Introduction to min-max theory](#).

Event organization

- 2025 **Parallel session in Geometric Analysis** held at RSME's 7th Congress of Young Researchers (Bilbao, Spain).
- 2023-2024 **Mathematics PhD seminars**, IMUS (Sevilla, Spain).

Attended events

- 2025 **Bifurcation theory and overdetermined problems**, 8-hour course at University of Seville (Spain).
- 2024 **VI Geometric Analysis seminar at Universidad de Jaén** (Spain).
- 2023 **Summer School in Geometric Analysis**, Université Libre de Bruxelles (Belgium).
- 2023 **Topics in Geometric Flows and Minimal Surfaces**, St. Mary's College (California, United States).
- 2023 **V Geometric Analysis seminar at Universidad de Jaén** (Spain).
- 2022 **9th Heidelberg Laureate Forum**, Neue Universität (Heidelberg, Germany).
- 2022 **Geometric Analysis at Granada**, IMAG (Granada, Spain).
- 2020 **XIII JAE School of Mathematics 2020**, ICMAT, (Madrid, Spain).
- 2018 **XIX School of Mathematics "Lluís Santaló". Interactions between PDEs and probability**, UIMP (Santander, Spain).

Outreach activities

- 2025 **Mathematics PhD seminar** at IMUS (Sevilla, Spain). Title of the talk: [Minimal surfaces, mean curvature and a \(very\) critical conjecture](#).
- 2025 **Young Researchers Seminar**, Universidad de Granada (Spain). Title of the talk: [A minimal road to geometry](#).
- 2024 **Finalist, Three Minute Thesis (3MT) Contest**, Universidad de Sevilla (Spain). Title of the talk: [¿Qué forma tienen las pompas de jabón?](#)
- 2024 **Beer & Science PhD seminar** at Universidad de Sevilla (Spain). Title of the talk: [La geometría detrás del cálculo de variaciones](#).
- 2023 **Mathematics PhD seminar** at IMUS (Sevilla, Spain). Title of the talk: [Variando variedades variacionales](#).

Computer skills

Scientific Software **Wolfram Mathematica**, **MATLAB** and \LaTeX user.

Languages

- English B2 First (Cambridge English).
- French B2 DELF.
- Portuguese Currently preparing for CELPE-BRAS exam (*Certificado Intermediário Superior*).
- Chinese Currently preparing for HSK2 level exam.
- Spanish Native speaker.

Note: All the available diplomas and certificates from the present CV can be checked [here](#).