

# ROBERTO GIMÉNEZ CONEJERO

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## EDUCATION

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### Ph.D in Mathematics

Thesis: *Singularities of germs and vanishing homology* 2017–2021  
Advisor: J. J. Nuño-Ballesteros  
*Universitat de València*, Valencia, Spain

### M.Sc. in Mathematics and Applications

Thesis: *Vanishing cycles for analytic maps.* 2016–2017  
External advisor: J. J. Nuño-Ballesteros. Internal tutor: O. Villamayor  
*Universidad Autónoma de Madrid*, Madrid, Spain

### B.Sc. in Mathematics

Thesis: *Maps from the plane to the plane and a theorem of Haefliger.* 2012–2016  
Advisor: R. Oset Sinha  
*Universitat de València*, Valencia, Spain

## DISTINCTIONS AND GRANTS

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**Researcher Fellowship** 2024–now  
*Mid Sweden University*

**Vicent Caselles prize** 2023  
*Spanish Royal Society of Mathematics (RSME)* and *BBVA bank*

**Rényi Postdoctoral Fellowship** 2021–2024  
*Alfréd Rényi Institute of Mathematics*

**Predocctoral grant** 2017–2021  
*Ministerio de Ciencia, Innovación y Universidades* Grant FPU16/03844

**M.Sc. Grant** 2016–2017  
of the Department of Mathematics of *Universidad Autónoma de Madrid*

**Bachelor's Degree Excellence Award** 2016  
*Universitat de València*

**Overall classification of the Bachelor's Degree** 2016  
9.76/10 and 3.76/4

**B.Sc. Grant** 2012–2016  
*Ministerio de Educación y Formación Profesional* General Grants (4 in total)

**Collaboration Internship Grant** 2015–2016  
*Ministerio de Educación y Formación Profesional*

**Severo-Ochoa-ICMAT grant: Introduction to research** 2016  
*Instituto de Ciencias Matemáticas*, Madrid

## PUBLICATIONS

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**The image Milnor number and excellent unfoldings** (w/ J.J. Nuño-Ballesteros),  
Q. J. Math., 2022, DOI: [10.1093/qmath/haab019](https://doi.org/10.1093/qmath/haab019)

**Singularities of mappings on ICIS and applications to Whitney equisingularity** (w/ J.J. Nuño-Ballesteros),  
Adv. Math., 2022, DOI: [10.1016/j.aim.2022.108660](https://doi.org/10.1016/j.aim.2022.108660)

**Thom condition and monodromy** (w/ Lê Dũng Tráng and J.J. Nuño-Ballesteros),  
Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM, 2022, DOI: [10.1007/s13398-022-01353-y](https://doi.org/10.1007/s13398-022-01353-y)

**A weak version of the Mond conjecture** (w/ J.J. Nuño-Ballesteros),  
Collect. Math., 2023, DOI: [10.1007/s13348-023-00411-x](https://doi.org/10.1007/s13348-023-00411-x)

**A note on complex plane curve singularities up to diffeomorphism and their rigidity** (w/ A. Fernández-Hernández),  
Res. Math. Sci., 2024, DOI: [10.1007/s40687-024-00439-w](https://doi.org/10.1007/s40687-024-00439-w)

## SENT MANUSCRIPTS

**Isotypes of ICIS and images of deformations of map germs**,  
[arXiv:2207.05196](https://arxiv.org/abs/2207.05196)

**Signature of the Milnor fiber of parametrized surfaces** (w/ G. Pintér),  
[arXiv:2401.14951](https://arxiv.org/abs/2401.14951)

## PRESENTATIONS

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### COURSES

**Curve singularities and their deformations** (TA session) 2023  
*Winter school in singularities and low-dimensional topology*, Rényi Institute

**Projective geometry** (in Spanish) (videos) 2020  
*Summer school SEMF 2020*, On-line

**Introduction to topology** (in Spanish) 2016  
*SEMF* and Faculty of Physics course, *Univeristat de València*

**Simplicial and singular homology** (in Spanish), 20h 2015–2016  
Extracurricular seminar, Department of Geometry and Topology, *Universitat de València*

### INVITED TALKS

**Good real pictures of complex maps** 2024  
*18th International Workshop on Real and Complex Singularities*, Valencia, Spain

**Complex curve singularities modulo smooth diffeomorphism** 2023  
*Spanish Topology Meeting*, Alicante, Spain

**Halfway towards the Mond conjecture** 2023  
*The singular workshop*, Budapest, Hungary

**Computing signatures of nearby fibres of parametrized complex surfaces** 2023  
*VI Congreso de jóvenes investigadores de la RSME (Topology session)*, León, Spain

**Computing a difficult invariant of holomorphic map germs** 2023  
*VI Congreso de jóvenes investigadores de la RSME (Singularities session)*, León, Spain

**Towards Mond's conjecture** 2022  
*17th International Workshop on Real and Complex Singularities*, São Carlos, Brazil

**Hazañas y enigmas de los gérmenes de aplicaciones holomorfas** (in Spanish) 2021  
*Special hybrid workshop for PhD students in singularities*, Madrid, Spain

## CONTRIBUTED AND SEMINAR TALKS

**Complex curve singularities modulo smooth diffeomorphism** 2023  
*7th International Workshop on Singularities in Geometry and applications*, Fortaleza, Brazil

**Complex curve singularities modulo smooth diffeomorphism** 2023  
*1st Budapest – Cluj Meeting in Singularities and Beyond*, Cluj-Napoca, Romania

**Signatures of Milnor fibers** 2023  
*Algebraic Geometry and Differential Topology Seminar*, Rényi Institute, Budapest, Hungary

**Feats and mysteries of holomorphic map germs** ([video](#)) 2022  
*Algebraic Geometry and Differential Topology Seminar*, Rényi Institute, Budapest, Hungary

**Monodromía de gérmenes de funciones analíticas sin puntos fijos** 2021  
*IX Encuentro de jóvenes topólogos*, Sevilla, Spain

**Monodromy of germs of analytic functions without fixed points** ([video](#)) 2021  
*Iberoamerican Webinar of Young Researchers in Singularity Theory and related topics*, On-line

**Monodromy of germs of analytic functions without fixed points** ([video](#)) 2020  
*16th International Workshop on Real and Complex Singularities*, São Carlos, Brazil

**On Whitney equisingular unfoldings of corank 1 map germs** 2020  
*V Congreso de Jóvenes Investigadores Castelló 2020*, Castellón, Spain

**Monodromy of germs of analytic functions without fixed points** 2020  
*3rd BYMAT Conference (Bringing Young Mathematicians Together)*, Valencia, Spain

**On Whitney equisingular unfoldings of corank 1 map germs** 2019  
*6th International Workshop on Singularities in Generic Geometry and Applications*, Valencia, Spain

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**A weak version of Mond's Conjecture for corank 1 maps and applications** 2019  
*Congreso Bienal de la Real Sociedad Matemática Española 2019*, Santander, Spain

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## POSTERS

**A weak version of Mond's Conjecture for corank 1 maps and applications** 2018  
*15th International Workshop on Real and Complex Singularities*, São Carlos, Brazil

## OTHER MERITS

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### TEACHING EXPERIENCE

**Universitat de València: 180 h** 2018–2020  
Valencia, Spain

**Innovation in education article** 2022  
*Comunidades de práctica predoctorales: Diez años del Seminari Predoc* (w/ E. Cosme Llópez, et al.)  
IN-RED 2022 <https://doi.org/10.4995/INRED2022.2022.15977>

**Budapesti Műszaki és Gazdaságtudományi Egyetem: 28 h** 2023  
Budapest, Hungary

## RESEARCH

- Extracurricular Internship**, *Ingenia-Telecom S.L.* (180h) 2015  
Performing R&D in machine learning.
- Collaboration Internship**, Department of Geometry and Topology, *Universitat de València* 2015–2016  
Learning Homology Theory and giving a seminar related to it. Supervisor: R. Oset Sinha.
- Introduction to research grant**, *Instituto de Ciencias Matemáticas* (Madrid) 2016  
*Functional analysis and quantum information theory*. Supervisor: C. Palazuelo Cabezón.

## EXPERIENCE IN ORGANISATION OF EVENTS

- 6th International Workshop on Singularities in Generic Geometry and Applications** 2019
- IV SEMF's winter symposium** 2019
- VIII SEMF's summer school** 2020
- Predoc seminar in Universitat de València, Faculty of Mathematics** 2019–2021

## DISSEMINATION WORK / POPULAR SCIENCE

- What does *Mathematics* mean?** (in Spanish) 2016  
Talk in Blasco Ibáñez Higschool, in Cullera (Valencia), Spain
- Una oca en mi café* Cycle of talks** (in Spanish) ([videos](#)) 2018  
Organizer of this cycle of talks, Valencia, Spain
- About brains and maths** (in Spanish) ([videos](#)) 2018  
In the cycle of talks *Una oca en mi café*, Valencia, Spain
- Noosfera interview** (in Spanish) 2021  
*La Razón's* podcast *Noosfera* ([link](#)), Spain