

# Ujué Etayo

## Employment

- Since February 2021, *Profesora ayudante doctora*.  
In the department of Mathematics, Statistics and Computation of the University of Cantabria (Spain). I have my own research project and I participate in another of Professor Carlos Beltrán. In addition to that, I teach about 200 hours of classes a year and supervise several students.
- April 2019 - February 2021, *Postdoc researcher*.  
In the Institute of Analysis and Number Theory at TUGraz (Austria). I worked on the team of professor Peter Grabner. My main assignment was research, but I also taught a 60-hour doctoral course on set point processes.
- December 2015 - March 2019, *Predoc researcher*.  
In the department of Mathematics, Statistics and Computation of the University of Cantabria (Spain). My PhD thesis, *El problema de distribución de puntos en la esfera* has been supervised by professor Carlos Beltrán. I studied the optimal distribution of points on spheres and other manifolds in the senses of minimizing Riesz and logarithmic energy and minimizing quadrature errors.

## Habilitations

- July 2023, Acreditación a titular.  
By the Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA).
- March 2022, Acreditación lingüística para impartir docencia en inglés.  
By Universidad de Cantabria.
- February 2022, Acreditación a contratada doctora.  
By the Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA).
- July 2019, Acreditación a ayudante doctora.  
By the Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA).

## Education

- **Universidad de Cantabria** Santander, Spain  
*PhD El problema de la distribución de puntos en la esfera* *Dec. 2015 - 2019*
  - SOBRESALIENTE CUM LAUDE
  - Advisor: Carlos Beltrán
- **Universidad de Cantabria** Santander, Spain  
*Master degree in mathematics and computer science* *2014 - 2015*

- **Université de Versailles Saint-Quentin-en-Yvelines** Versailles, France  
*Erasmus program* 2012 - 2013  
 – Although I was a bachelor student, I followed a postgraduate programme.
- **4-Universidad de Valladolid** Valladolid, Spain  
*Degree in mathematics* 2010 - 2014

## Publications

My publications have more than 100 citations.

11. C. Beltrán, U. Etayo and P. R. López-Gómez, *Low energy points on the sphere and the real projective plane*, Journal of Complexity 101742, 2023.
10. M. Ehler, U. Etayo, B. Gariboldi, G. Gigante and T. Peter, *Asymptotically optimal cubature formulas on manifolds for prefixed weights*, Journal of Approximation Theory 271, 105632, 2021.
9. U. Etayo, *Spherical cap discrepancy of the Diamond ensemble*, Discrete & Computational Geometry, **66**, 4, 1218-1238, 2021.
8. U. Etayo, *A sharp Bombieri inequality, logarithmic energy and well conditioned polynomials*, Transactions of the American Mathematical Society, **374**, 7, 5113–5129, 2021.
7. C. Beltrán, U. Etayo, J. Marzo and J. Ortega-Cerdà, *A sequence of polynomials with optimal condition number*, Journal of the American Mathematical Society, **34**, 1, 219-244, 2021.
6. C. Beltrán and U. Etayo, *The Diamond ensemble: a constructive set of points with small logarithmic energy*, Journal of Complexity **59**, 101471, 2020.
5. C. Beltrán and U. Etayo, *The Diamond ensemble: a well distributed family of points on  $\mathbb{S}^2$* , 13th International conference on Sampling Theory and Applications (SampTA), Bordeaux, France, 1–4, 2019.
4. C. Beltrán and U. Etayo, *A generalization of the spherical ensemble to even-dimensional spheres*, Journal of Mathematical Analysis and Applications **475**, 2, 1073-1092, 2019.
3. C. Beltrán and U. Etayo, *The Projective Ensemble and Distribution of Points in Odd-Dimensional Spheres*, Constr Approx **48**, 1, 163–182, 2018.
2. U. Etayo, J. Marzo and J. Ortega-Cerdà, *Asymptotically optimal designs on compact algebraic manifolds*, J. Monatsh Math **186**, 2, 235–248, 2018.
1. U. Etayo, *Aspectos computacionales de la Descomposición Primaria*, Gaceta de la Real Sociedad Matemática Española **18**, 2, 337–351, 2015.

## Referee

I have refereed numerous papers in first rank academic journals.

## Awards, Grants & Honours

Premio José Luis Rubio de Francia - RSME and BBVA . . . . .	2022
Premio de Investigación del Consejo Social Juan M <sup>a</sup> Parés - UVa . . . . .	2022
Best poster award - BYMAT2020 conference, Valencia (Spain) . . . . .	2020
Premio Vicent Caselles - RSME and BBVA . . . . .	2020
Best video award “Mi tesis en 3 minutos” . . . . .	2017
Best poster award - In the Congreso RSME de jóvenes investigadores, Murcia (Spain) . . . .	2015
Honours in the Master degree . . . . .	2015
Premio al compromiso universitario . . . . .	2011

**Research stays**

I have done 11 international stays, from 1 week to 3 months length in the universities of Barcelona, Cantabria, Navarra, KTH in Stockholm, KU Leuven, Vienna, Graz, Michigan and ICERM at Brown University.

**Invited talks**

I have imparted 55 conferences and seminars in more than 10 countries. Three times as plenary speaker.

**Teaching - Supervising**

I have taught 20 complete courses on several topics, from Calculus 1 to Advanced Conmutative Algebra. In particular, I have designed two subjects of 60 hours, one on Determinantal Point Processes and one on Logic. I have supervised 3 undergrad students and I’m supervising a Phd student, Pedro R. López-Gómez, who started in 2021.

**Languages**

1. **Spanish:** mother tongue.
2. **French:** fluent (B2).
3. **English:** fluent (C2).
4. **German:** intermediate (B2).