Laureano González Vega

CUNEF UNIVERSIDAD
Almansa 101, 28040 Madrid Spain
laureano.gonzalez@cunef.edu
CUNEF Website
Google Scholar
ORCID

EMPLOYMENT

- 1987-1991: Assistant Professor (Universidad de Cantabria, Spain).
- 1991-2002: Associate Professor (Universidad de Cantabria, Spain).
- 2002-2019: Full Professor (Universidad de Cantabria, Spain).
- 2019-2024: Full Professor, Dept. of Quantitative Methods (CUNEF Universidad, Spain).
- 2001-2004: Dean, Faculty of Science (Universidad de Cantabria, Spain).
- 2004-2005: General Director for Universities and Research (Gobierno de Cantabria, Spain).
- 2006-2008: Director of the International Center for Mathematical Meetings (CIEM, Universidad de Cantabria, Spain).
- 2007-2010: Scientific Director for the CONSOLIDER INGENIO 2010 Program (Ministerio de Ciencia e Innovación, Spain).
- 2009-2012: Deputy Director for the Evaluation of Programmes and Institutions (ANECA, Spain).

EDUCATION

- Bachelor in Mathematics, Universidad de Cantabria, 1987
- PhD in Mathematics, Universidad de Cantabria, 1989

FIELDS OF INTEREST

Symbolic Computation. Computer Aided Geometric Design. Visualization.

PUBLICATIONS

1. L. Gonzalez-Vega, I. Necula: Efficient topology determination of implicitly defined algebraic plane curves. Computer Aided Geometric Design 19, 719-743, 2002.

2. G. M. Diaz-Toca, L. Gonzalez-Vega, H. Lombardi: Generalizing Cramer's rule: Solving uniformly linear systems of equations. SIAM Journal on Matrix Analysis and Applications 27, 621-637, 2005.

3. F. Etayo, L. Gonzalez-Vega, N. del Rio: A new approach to characterizing the relative position of two ellipses depending on one parameter. Computer Aided Geometric Design 23, 324-350, 2006.

4. M. Aigner, B. Jüttler, L. Gonzalez-Vega, J. Schicho: Parameterizing surfaces with certain special support functions, including offsets of quadrics and rationally supported surface. Journal of Symbolic Computation 44, 180-191, 2009.

5. L. Gonzalez-Vega, I. Polo-Blanco: A symbolic analysis of Vermeille and Borkowski polynomials for transforming 3D Cartesian to geodetic coordinates. Journal of Geodesy 83, 1071-1081, 2009.

6. J. C. Butcher, R. M. Corless, L. Gonzalez-Vega, A. Shakoori: Polynomial algebra for Birkhoff interpolants. Numerical Algorithms 56, 319-347, 2011.

7. E. Chan, R. M. Corless, L. Gonzalez-Vega, J. R. Sendra, J. Sendra: Upper Hessenberg and Toeplitz Bohemians. Linear Algebra and Its Applications 601, 72- 100, 2020.

8. J. Caravantes, G. M. Diaz-Toca, M. Fioravanti, L. Gonzalez-Vega: Solving the interference problem for ellipses and ellipsoids: New formulae. Journal of Computational and Applied Mathematics 407, Art. 114072, 2022.

9. J. Caravantes, G. M. Diaz-Toca, M. Fioravanti, L. Gonzalez-Vega: Tools for analyzing the intersection curve between a torus and a quadric through projection and lifting. Computer Aided Geometric Design, 126, Art. 102533, 2026.

10. J. Caravantes, G. M. Diaz-Toca, M. Fioravanti, L. Gonzalez-Vega: Closed form formulae for the interference of two conics. Computer Aided Geometric Design, 126, Art. 102533, 2026.

SELECTED ACADEMIC HONOURS AND GRANTS

- **Grant:** *Mathematical Visualization: Foundations, Algorithms and Applications*. Financing entity: Ministerio de Ciencia e Innovación. Period: 2021-2024. PI: L. González Vega.
- **Grant:** *Symbolic Computation: new challenges in Algebra and Geometry together with its applications*. Financing entity: Ministerio de Economía y Competitividad. Period: 2018-2020. PI: L. González Vega.
- **Grant:** *ShApes, Geometry and Algebra* – SAGA. Marie-Curie Initial Training Network (FP7-PEOPLE-2007-1-1-ITN). Financing entity: European Union. Research team: Kongsberg SIM (Austria), Missler Software (France), INRIA (France), GraphiTech (Italy), SINTEF (Norway), University of Oslo (Norway), Johannes Kepler Universitaet (Austria), Universidad de Cantabria (Spain), Vilniaus Universitetas (Lithuania), National and Kapodistrian University of Athens (Greece). Period: 2008-2012. PI: L. González Vega (Spain) and Tor Dokken (General Coord.).

PROFESSIONAL ACTIVITIES

Together with the company Suomitech Soluciones Innovadoras, and since 2012, he has coordinated the development of the ApliEval app (built on Drupal), which serves as the evaluation platform used by several Spanish quality assurance agencies, including ACSUG, AQUIB, AQU, AVAP, UNIBASQ, ACSUCyL, and madri+d.