



Prof. Dr. Tomás Recio

Profesor Magistral
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Résumé: Tomás Recio

Full CV at www.recio.tk

- Born in Oviedo, Spain, December 14, 1949.
- B. Sc., M.Sc. (1972), Ph. D. (1976). Universidad Complutense de Madrid.
- Full Professor of Algebra at the Universidad de Cantabria (Santander, Spain), since 1982 to September 2020 (retired). Full professor (*Catedrático de Universidad*) since Oct. 13, 1981, initial position at Universidad de Granada.
- Profesor Magistral, Universidad Nebrija, Madrid, Spain, since October 2020.

Awards: Placa de Honor de la Asociación Española de Científicos (2004), Encomienda de la Orden de Alfonso X El Sabio (2008), Medalla de Plata de la Universidad de Cantabria (2020), Medalla de la Real Sociedad Matemática Española (2021).

Previous positions (with tenure) at the C.S.I.C. (Consejo Superior de Investigaciones Científicas, Higher Council for Scientific Research, Madrid), Universidad Complutense de Madrid, Universidad de Málaga, Universidad de Granada.

Large number of research visits, of diverse length, at many different North American or European universities and research centers, often with participation at the different Seminars and Colloquia.

- Teaching experience in a variety of Algebra, Geometry and Mathematics Education undergraduate and graduate courses, such as the Secondary Education Math Teacher Initial Training Master degree of the University of Cantabria.
- Ph. D. advisor of over a dozen students. Former students have held or hold now university positions (mostly chairs, but also as Rectors of different universities) in Algebra, Computer Science, Geometry or Mathematics Education. See <https://genealogy.math.ndsu.nodak.edu/id.php?id=37084>

- Remarkable experience as referee for
 - Ph. D. thesis,
 - University positions,
 - Research centers and universities (evaluation of quality)
 - Research projects
 - Research papers

involving many different regional or national agencies in many countries.

- Seis sexenios
- Author of over two hundred published scientific papers and four hundred fifty scientific communications in different international journals and conferences. Topics: Real Algebraic Geometry, CAD, Robotics, Computer Algebra and Geometry, Automatic Reasoning in Dynamic Geometry, Mathematics Education, Open Science. See <http://personales.unican.es/reciot/tomas/publications.html>
- Leader of a large research group on Computational Algebraic Geometry, involving researchers from several universities, with external support since 1985, through different Spanish and European projects.
- Involved along the years, as leader or member of many research teams with public funding (European, national, CNRS...), dealing with Mathematics Education or Open Science issues.
- Large experience as responsible (General Chair, Program Chair, Local Organization, etc.) of many different International Conferences, all over the world.
- Large experience in the management of academic and educational issues, as
 - former Secretary General, Vice-Provost for Research or Director of the Institute for Educational Sciences (ICE) of the University of Cantabria
 - former President of the Education Commission of the Real Sociedad Matemática Española, Secretary and President of the national ICMI sub-commission, ie. acting as the Spanish representative to the ICM I(International Commission on Mathematics Instruction)
 - former President of the Consejo Escolar (Regional School Board) de Cantabria. He has been for about a decade, the President of the Consejo Escolar de Cantabria (Regional School Board) and a member of the Consejo Escolar del Estado Español (Spain School Board). Both institutions have the specific mission to link the education system to the community (of parents, administration and education authorities, teachers, etc).

He has developed, over the years, diverse connections to regional, national, and international organizations and authorities concerning scientific issues.

- Further information available at <http://www.recio.tk/> or at <http://www.arbolmat.com/tomas-recio/>

Santander, February 2024



Tomás J. Recio

Refereed journal publications for the period 2020-2024

Jablonski, S.; Lázaro del Pozo, C.; Ludwig, M.; Recio, T.: “MathCityMap, paseos matemáticos a través de dispositivos móviles”. UNO, Revista de Didáctica de las Matemáticas. No. 87, enero 2020, pp. 47-54.

<https://www.grao.com/es/producto/mathcitymap-paseos-matematicos-a-traves-de-dispositivos-moviles-un08797755>

Kovács, Z.; Recio, T. ; Vélez, M. P.: “Reasoning about linkages with dynamic geometry”. Journal of Symbolic Computation, J. Symb. Comput. Volume 97, March–April 2020, pp. 16-30, <https://doi.org/10.1016/j.jsc.2018.12.003>

Botana F.; Kovács Z.; Recio T.: “Automatically Augmented Reality for Outdoor Mathematics”. In: Research on Outdoor STEM Education in the digiTal Age. Proceedings of the ROSETA Online Conference in June 2020. Matthias Ludwig, Simone Jablonski, Amélia Caldeira and Ana Moura (Editors). WTM – Verlag für wissenschaftliche Texte und Medien, Münster 2020. Conference Proceedings in Mathematics Education (6), pages 71-78. <https://doi.org/10.37626/GA9783959871440.0>

Botana, F.; Kovács, Z.; Recio, T.; Vélez, M. P.: “Hacia un autómata geométrico”. La Gaceta de la Real Sociedad Matemática Española, Vol. 23 (2020), Núm. 2, Págs. 343–371. <http://gaceta.rsme.es/vernumero.php?id=114>

Ladra, M.; Páez-Guillán, P.; Recio, T.: “Dealing with negative conditions in automated proving: tools and challenges. The unexpected consequences of Rabinowitsch’s trick.” Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. RACSAM 114 (4), (Oct. 2020). <https://doi.org/10.1007/s13398-020-00874-8>

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Kovács, Z; Lichtenegger, B.; Recio, T.; Richard P. R.; Vélez, M.P.: "Exploring artwork through Delaunay triangulations". In: Annie Savard, Rebecca Pearce (eds.), MACAS in the Digital Era: Proceedings of the 2019 MACAS (Mathematics and its Connections to the Arts and Sciences) Symposium, Montreal, Quebec. Sept. 2020. <https://mcgill.ca/macas2019/proceedings>

Carrillo de Albornoz y Torres, A.; Recio, T.: "De curva a curva, con GeoGebra". Boletín de la Sociedad Puig Adam de Profesores de Matemáticas, vol. 110. Oct. 2020. pp. 8--26.

Kovács, Z.; Recio, T.; Richard, P.R.; Van Vaerenbergh S.; Vélez, M.P.: "Towards an Ecosystem for Computer-Supported Geometric Reasoning". International Journal of Mathematical Education in Science and Technology. Nov. 2, 2020 (on-line). Vol. 53, (7), pp. 1701-1710, 2022. <https://doi.org/10.1080/0020739X.2020.1837400>

Gomez-Diaz, T. and Recio, T.: "Towards an Open Science definition as a political and legal framework: on the sharing and dissemination of research outputs". POLIS, No. 19, 2020, pp 5-25, <https://uet.edu.al/polis/wp-content/uploads/2022/01/polis-19.pdf> <https://doi.org/10.58944/yuro5734>

Kovács, Z.; Recio, T.: "Alternative Solutions and Comments to the Problem Corner--October 2020 issue". The Electronic Journal of Mathematics and Technology (eJMT). https://php.radford.edu/~ejmt/ProblemCornerDocs/eJMT_Alternative_Solutions_to_Oct_2020.pdf

Kovács, Z.; Recio, T.: "GeoGebra reasoning tools for humans and for automatons". Electronic Proceedings of the 25th Asian Technology Conference in Mathematics, December 14-16, 2020. ISSN 1940-4204 (online version). <http://atcm.mathandtech.org/EP2020/invited/21786.pdf>

Gomez-Diaz T.; Recio T.: "Open comments on the Task Force SIRS report: Scholarly Infrastructures for Research Software (EOSC Executive Board, EOSCArchitecture)". Research Ideas and Outcomes (RIO Journal) 7: e63872. <https://doi.org/10.3897/rio.7.e63872> (05 Feb. 2021) <http://arxiv.org/abs/2108.06127> (13 August 2021)

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Kovács, Z.; Recio, T.; Vélez, M. P.: "Merging Maple and GeoGebra Automated Reasoning Tools". In: Corless R.M., Gerhard J., Kotsireas I.S. (eds.) Maple in Mathematics Education and Research. MC 2020. Communications in Computer and Information Science, vol 1414. Springer, Cham, 2021. https://doi.org/10.1007/978-3-030-81698-8_17

Barlovits, S.; Jablonski, S.; Lázaro, C.; Ludwig, M.; Recio, T.: "Teaching from a Distance—Math Lessons during COVID-19 in Germany and Spain". Educ. Sci. 2021, 11, 406. <https://doi.org/10.3390/educsci11080406>

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Fortuny, J.M.; Recio, T.; Richard, P.R.; Roanes-Lozano, E.: “Análisis del discurso de los profesores en formación en un contexto de innovación pedagógica en geometría.” Annales de Didactique et de Sciences Cognitives, Volume 26, 2021, p. 195 –220.
<https://doi.org/10.4000/adsc.1168>

Losada-Liste, R.; Recio, T.: “Mirando a los cuadros a través de los ojos de Voronoi. (Looking at the paintings through Voronoi’s eyes)”. Boletín de la Sociedad Puig Adam de Profesores de Matemáticas, vol. 112. Oct. 2021, p. 32—53.

Botana F.; Kovács Z.; Recio T.: “A mechanical geometer”. Mathematics in Computer Science, 15, 631–641 (2021). <https://doi.org/10.1007/s11786-020-00497-7>

Carrillo de Albornoz, A.; Recio T.: “Extending envelope computations in Computer Algebra/Dynamic Geometry environments”. The Electronic Journal of Mathematics and Technology (eJMT), Vol. 15, (3), 2021.

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Recio,T.; Losada,R.; Kovács, Z; Ueno, C.: “Discovering Geometric Inequalities: The Concourse of GeoGebra Discovery, Dynamic Coloring and Maple Tools”. Mathematics 2021, 9(20), 2548. <https://doi.org/10.3390/math9202548>

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(<https://doi.org/10.12688/f1000research.78195.2>)

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Recio,T.; Losada,R.; Tabera, L.F.; Ueno, C.: "Visualizing a cubic linkage through the use of CAS and DGS". Mathematics 2022 - Vol. 10(15), 2550. Special Issue on Symbolic Computation for Mathematical Visualization. 22 Jul 2022; <https://doi.org/10.3390/math10152550>

Recio, T.; Vélez, M.P.; Ueno, C.: "Niagara Falls and the Origins of Computer Algebra". Maple Transactions Vol. 2, No. 1, Article 14362, July 2022. <https://doi.org/10.5206/mt.v2i1.14362>

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Herrero, A. C., Recio, T., Tolmos, P., Vélez, M.P.: “From the Steam Engine to STEAM Education: An Experience with Pre- Service Mathematics Teachers”. Mathematics 2023, Volume 11, Issue 2, 473, 16, Jan. 2023. <https://doi.org/10.3390/math11020473>

Gamboa, A., Gamboa, J.M., Recio, T.: “Problem Corner”. The Electronic Journal of Mathematics and Technology. February 2023.
https://php.radford.edu/~ejmt/ProblemCornerDocs/eJMT_ProblemCorner_Problems_Feb2023.pdf

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Losada-Liste, R., Recio T.: “Inclinando la botella de Piaget con GeoGebra Discovery”. Boletín de la Soc. Puig Adam, núm 115 (Abril 2023), pp. 43-86.

Kovács, Z., Brown, C., Recio, T., Vajda, R.: “A web version of Tarski, a system for computing with Tarski formulas and semialgebraic sets”, in 2022 24th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), Hagenberg / Linz, Austria, 2022 pp. 59-62.
<https://doi.org/10.1109/SYNASC57785.2022.00019>

Ariño-Morera, B., Benito, A., Nolla, A., Recio, T., Seoane, E.: “Looking at Okuda’s artwork through GeoGebra: A Citizen Science experience”. AIMS-Mathematics 2023, Volume 8, Issue 8: 17433-17447. <https://doi.org/10.3934/math.2023890>

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https://php.radford.edu/~ejmt/ProblemCornerDocs/eJMT_ProblemCorner_Problems_Jun2023.pdf

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<https://doi.org/10.3934/math.2023993>

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