

CURRICULUM VITAE

Guillermo Cortiñas

PERSONAL	Born January 15, 1962 in Buenos Aires, Argentina. Married, 3 children.
EDUCATION	Doctor en Ciencias Matemáticas, Universidad de Buenos Aires, 1989 Licenciado en Ciencias Matemáticas, Universidad de Buenos Aires, 1984
CURRENT POSITIONS	<i>Profesor Titular Plenario</i> , Univ. Buenos Aires. <i>Investigador Superior</i> , CONICET
AFFILIATION	Departamento de Matemática/IMAS Fac. Cs. Exactas y Naturales, UBA
CURRENT RESEARCH PROJECTS	<i>K-theory, homology and noncommutative geometry</i> . PICT-2021-I-A-00710. <i>Álgebra, geometría y topología no conmutativas</i> . UBACyT 2023–2026, 256BA. <i>Álgebra y geometría no conmutativas</i> . PIP 2021-2023 GI, 11220200100423CO.
HONORS & AWARDS	Humboldt Research Award, 2016. Distinción a la Excelencia Académica, UBA, 2019 and 2022. Premio Consagración, Academia Nacional de Ciencias Exactas, Físicas y Naturales (ANCEFN), 2020. Fellow of the American Mathematical Society, Class of 2025. Corresponding Member, ANCEFN, 2025. Established Mathematician Award 2026, Institute for Mathematical Sciences of the Americas.
SELECTED INVITED ADDRESSES	<i>Virtual ICM 2022</i> Invited Speaker, CDC Panel Online cooperation in mathematics: challenges and opportunities for developing countries. <i>Reunión Anual de la Unión Matemática Argentina</i> , Rey Pastor Lecture, Universidad de San Luis, 2014. <i>International Congress of Mathematicians</i> , Seoul, South Korea, 2014, Invited Speaker, Algebra Session. <i>Congreso Latinoamericano de Matemáticos</i> , Córdoba, Argentina, 2012, Plenary Lecture. <i>Reunión Anual de la Unión Matemática Argentina</i> , González Domínguez Lecture, Universidad de Mar del Plata, 2009.
EDITORIAL	Annals of <i>K</i> -theory (Managing Editor) Orbita Mathematicae (Editor in Chief)
PROFESSIONAL SERVICE	Chair (October 2023–) (previously Vicechair (2019–2023)) Santaló Mathematical Research Institute (IMAS). President (2017– 2021), Unión Matemática de América Latina y el Caribe (UMALCA). Member of the Program Committee, Mathematical Congress of the Americas 2017. Chair of the Algebra Panel, International Congress of Mathematicians 2018.

PHD THESIS
DIRECTED

1. José Luis Castiglioni. *Dold-Kan correspondence for rings*. Universidad de Buenos Aires, 2003.
2. María Luisa de León Mallorquín. *K-theory and cyclic homology of hypersurfaces*. Universidad de La Laguna, Spain, 2008.
3. Rubén Burga. *Homology of complete intersections with isolated singularities*. Universidad Nacional de Ingeniería, Perú, 2009.
4. María Eugenia Ellis Raggio. *Equivariant kk -theory and isomorphism conjectures*. Universidad de Valladolid, España, 2011.
5. Gisela Tartaglia. *Algebraic and topological K-theory of group rings*. Universidad de Buenos Aires, 2015.
6. María Eugenia Rodríguez. *Operator algebras on L^p -spaces associated to oriented graphs*. Universidad de Buenos Aires, 2016.
7. Emanuel Rodríguez Cirone. *Bivariant algebraic K-theory categories and a spectrum for G-equivariant bivariant algebraic K-theory*. Universidad de Buenos Aires, 2017.
8. Diego Montero. *Homotopy classification of purely infinite simple Leavitt path algebras*. Universidad de Buenos Aires, 2019.
9. Santiago Vega. *Bivariant algebraic hermitian K-theory*. Universidad de Buenos Aires, 2021.
10. Guido Arnone. *Bivariant algebraic K-theory and classification problems for $*$ -algebras*. Universidad de Buenos Aires, 2025.

POSTDOCTORAL
SUPERVISION

Devarshi Mukherjee, Feodor Lynden Fellow, Alexander von Humboldt Foundation, 4/2022-3/2024.

CONFERENCES
ORGANIZED

1. CIMP School 2025: *K*-theory and operator algebras, July 28-August 1, La Plata, and August 4-8, Buenos Aires. Organizer together with Gisela Tartaglia and Enrique Pardo.
2. Combinatorial $*$ -algebras, Mathematisches Forschungsinstitut Oberwolfach, March 10-15, 2024. Organizer together with Søren Eilers, Elizabeth Gillaspay and Roozbeh Hazrat.
3. Mathematical Congress of the Americas, Universidad de Buenos Aires, July 9-23, 2021. General organizer, together with A. Solotar (President of the local committee).
4. ICM 2018 Satellite: *K*-theory conference, Universidad Nacional de La Plata (July 16-20, 2018) and Universidad de Buenos Aires, (July 23-27, 2018) (with G. Tartaglia).
5. Research Trimester on *K*-theory, HIM, Bonn, May-August, 2017 (with Hélène Esnault, Christian Haesemeyer, Holger Reich and Jonathan Rosenberg).
6. XXI Coloquio Latinoamericano de Álgebra, July 25-29, 2016 (with T. Krick and A. Solotar).
7. *K*-theory, cyclic homology and motives, Rutgers University, August 17-21, 2016 (with A. Buch, E. Friedlander, C. Haesemeyer, A. Merkurjev and C. Mazza).
8. Topics in Noncommutative Geometry: 3era Escuela de Invierno Luis Santaló-CIMPA Research School, July 26, August 6, 2010.
9. Swisk, Sedano Winter School on *K*-theory, Sedano, Spain, January 21-27, 2007.
10. ICM 2006 Satellite: International Conference on *K*-theory and Noncommutative Geometry, Valladolid, Spain, August 31, September 6, 2006.
11. BASCOLA: Buenos Aires Satellite, Coloquio Latinoamericano de Álgebra, Buenos Aires, August 10-12, 2005 (with A. Dickenstein and M. Farinati).

PUBLICATION LIST

Published articles and books

1. G. Cortiñas, O.E. Villamayor. Cyclic homology of $k[Z/2Z]$. *Rev. Un. Mat. Argentina* 33 (1987) 55–61.
2. G. Cortiñas, J.A. Guccione, O.E. Villamayor. Cyclic homology of $k[Z/pZ]$. *K-theory* 2 (1989) 603–616.
3. Noaï Fitchas (L. Caniglia, G. Cortiñas, S. Danón, J. Heintz, T. Krick, P. Solernó), A. Galligo. Nullstellensatz effectif et conjecture de Serre (théoreme de Quillen-Suslin) pour le calcul formel. *Math. Nachr.* 149 (1990) 231–253.
4. L. Caniglia, G. Cortiñas, S. Danón, J. Heintz, T. Krick, P. Solernó. Algorithmic aspects in Suslin’s proof of Serre’s conjecture. *Comput. Complexity* 3, (1993) 31–55.
5. G. Cortiñas, J.A. Guccione, J.J. Guccione. Decomposition of Hochschild and cyclic homology of commutative differential graded algebras. *J. Pure Appl. Algebra* 83 (1992) 219–235.
6. G. Cortiñas. L -theory and dihedral homology. *Math. Scand.* 73 (1993) 53–69.
7. G. Cortiñas. L -theory and dihedral homology II. *Topology Appl.* 51 (1993), 53–69.
8. G. Cortiñas. Stiefel-Whitney Classes for quadratic modules. *Comm. Algebra* 21 (1993) 163–178.
9. G. Cortiñas, C. Weibel. Homology of Azumaya algebras. *Proc. Amer. Math. Soc.* 121, (1994). 53–55.
9. G. Cortiñas, S. Geller, C. Weibel. The artinian Berger conjecture. *Math. Z.* 228 (1998) 569–588.
10. G. Cortiñas. Cyclic homology of commutative algebras over arbitrary ground rings. *Comm. Algebra* 27, (1999) 1403–1412.
11. G. Cortiñas, J. Shapiro. Central extensions of quadratic Lie algebras and its relation to dihedral homology. *J. Algebra* 150 (1996) 725–756.
14. G. Cortiñas. On the derived functor analogy in the Cuntz-Quillen framework for cyclic homology. *Algebra Colloq.* 5 (1998) 305–328.
15. G. Cortiñas. Infinitesimal K -theory. *J. reine angew. Math.* 503 (1998) 305–328.
16. G. Cortiñas, F. Krongold. Artinian algebras and differential forms. *Comm. Algebra* 27 (1999) 1711–1716.
17. G. Cortiñas. Periodic cyclic homology as sheaf cohomology. *K-theory* 20, (2000), 175–200.
18. G. Cortiñas. Interchanging holims and coholims in CAT. *Bol. Acad. Nac. Cienc. (Córdoba)* 65 (2000), 95–102.
19. G. Cortiñas. An explicit formula for PBW quantization. *Comm. Algebra*, 30 (2002) 1705–1713.
20. G. Cortiñas. De Rham and infinitesimal cohomology in Kapranov’s model for noncommutative algebraic geometry. *Compositio Math.* 136 (2003) 171–203.
21. G. Cortiñas, C. Valqui. Excision in bivariant periodic cyclic cohomology: a categorical approach. *K-theory* 30, 2003, 167–201.
22. J. L. Castiglioni, G. Cortiñas. Cosimplicial versus DG-rings: a version of the Dold-Kan Correspondence. *J. Pure Appl. Algebra* 191 (2004) 119–142.
23. G. Cortiñas. The structure of smooth algebras in Kapranov’s framework for noncommutative geometry. *J. Algebra* 281 (2004) 679–694.
24. G. Cortiñas. The obstruction to excision in K -theory and in cyclic homology. *Invent. Math.* 143 (2006) 143–173.
25. G. Cortiñas, C. Haesemeyer, C. Weibel. K -regularity, cdh-fibrant Hochschild homology, and a conjecture of Vorst. *J. Amer. Math. Soc.*, 21 (2008), 547–561.
26. G. Cortiñas, C. Haesemeyer, M. Schlichting, C. Weibel. Cyclic homology, cdh-cohomology and negative K -theory. *Ann. of Math.*, 167, (2008). 549–573.

27. G. Cortiñas, A. Thom. Bivariant algebraic K -theory. *J. reine angew. Math.*, 610, 71–124.
28. G. Cortiñas, A. Thom. Comparison between algebraic and topological K -theory of locally convex algebras. *Adv. Math.*, 218 (2008), 266–307.
29. G. Cortiñas, J. Cuntz, M. Karoubi, R. Nest, Eds. *K-Theory and Noncommutative Geometry: Connections and Applications to Other Areas of Mathematics*. European Mathematical Society Publishing House, 2008.
30. G. Cortiñas, C. Haesemeyer, M.E. Walker, C. Weibel. The K -theory of toric varieties. *Trans. Amer. Math. Soc.* 361 (2009), 3325–3341.
31. G. Cortiñas, C. Haesemeyer, C. Weibel. Infinitesimal cohomology and the Chern character to negative cyclic homology. *Math. Ann.* 344 (2009) 891–922.
32. G. Cortiñas, C. Weibel. Relative Chern characters for nilpotent ideals. *Algebraic Topology. The Abel Symposium 2007*. Baas, N.; Friedlander, E.M.; Jahren, B.; Østvær, P.A. (Eds.). Springer, 2009; pp 61–82.
33. P. Ara, M. Brustenga, G. Cortiñas. K -theory of Leavitt path algebras. *Münster J. Math.*, 2 (2009), 5–34.
34. G. Cortiñas, C. Haesemeyer, M. E. Walker, C. Weibel. Bass’ NK groups and cdh -fibrant Hochschild homology. *Invent. Math.* 181 (2), pp. 421–448.
35. P. F. Baum, G. Cortiñas, R. Meyer, R. Sánchez García, M. Schlichting, B. Toën. Topics in algebraic and topological K -theory. G. Cortiñas (Ed.). Springer Lecture Notes in Mathematics vol 2008. Springer, 2011.
36. G. Cortiñas, C. Haesemeyer, M. E. Walker, C. Weibel. A negative answer to a question of Bass. *Proc. Amer. Math. Soc.* 139(4):1187–1200, (2011).
37. G. Cortiñas, Ed. *Topics in Noncommutative Geometry*. Clay Mathematics Institute Proceedings, Vol 16. American Mathematical Society, Rhode Island, 2012.
38. G. Cortiñas, A. Thom. Algebraic geometry of topological spaces I. *Acta Math.* 209 (2012) 83–131.
39. G. Cortiñas, C. Haesemeyer, M. E. Walker, C. Weibel. K -theory of cones of smooth varieties. *J. Algebraic Geom.* 22 (2013) 13–34.
40. P. Ara, G. Cortiñas. Tensor products of Leavitt path algebras. *Proc. Amer. Math. Soc.*, 141(8) 2629–2639.
41. G. Cortiñas, G. Tartaglia. Operator ideals and assembly maps in K -theory. *Proc. Amer. Math. Soc.*, 142 (2014), 1089–1099.
42. G. Cortiñas, C. Haesemeyer, M.E. Walker, C. Weibel. The K -theory of toric varieties in positive characteristic. *J. Topol.*, (2014) 7 (1):247–286.
43. G. Cortiñas, G. Tartaglia. Trace class operators, regulators, and assembly maps in K -theory. *Doc. Math.*, 19 (2014) 439–455.
44. G. Cortiñas, E. Ellis. Isomorphism conjectures with proper coefficients. *J. Pure Appl. Algebra* 218 (2014),no. 7, 1224–1263.
45. G. Cortiñas, C. Haesemeyer, M.E. Walker, C. Weibel. Toric varieties, monoid schemes and cdh descent. *J. Reine Angew. Math.*, 698, 1-54 (2015). doi:10.1515/crelle-2012-0123.
46. B. Abadie, G. Cortiñas. Homotopy invariance through small stabilizations. *J. Homotopy Relat. Struct.* (2015) 10:459-493, doi:10.1007/s40062-013-0069-9.
47. G. Cortiñas. Cyclic homology, tight crossed products, and small stablizations. *J. Noncommut. Geom.*, 8(4) 1191–1223 (2014).
48. G. Cortiñas. Excision, descent, and singularity in algebraic K -theory. *Proceedings ICM Seoul 2014*, 143–162.
49. G. Cortiñas, G. Tartaglia. Compact operators and algebraic K -theory for groups which act properly and isometrically on Hilbert space. *J. reine angew. Math.* Ahead of Print, DOI 10.1515/ crelle-2014-0154.
50. G. Cortiñas, E. Rodríguez Cirone. Singular coefficients in the K -theoretic Farrell-Jones conjecture. *Algebraic & Geometric Topology* 16, (2016), 129–147.
51. G. Cortiñas, J. Cuntz, R. Meyer, G. Tamme. Weak completions, bornologies and rigid cohomology. *Journal of Geometry and Physics* 129 (2018) 192–199.

52. G. Cortiñas, M. E. Rodríguez. L^p -operator algebras associated with oriented graphs. *Journal of Operator Theory*, 81 (2019), 225–254.
53. G. Cortiñas, C. Haesemeyer, M.E. Walker, C. Weibel. The K -theory of toric schemes over regular rings of mixed characteristic. To appear in *Singularities, Algebraic Geometry, Commutative Algebra, and Related Topics. Festschrift for Antonio Campillo on the Occasion of his 65th Birthday*. Gert-Martin Greuel, Luis Narváez and Sebastià Xambó-Descamps, Eds. Springer, 2018, 455–479.
54. G. Cortiñas, J. Cuntz, R. Meyer, G. Tamme. Nonarchimedean bornologies, cyclic homology and rigid cohomology. *Documenta Mathematica*, 23 (2018) 997–1045.
55. G. Cortiñas, D. Montero. Algebraic bivariant K -theory and Leavitt path algebras. *Journal of Noncommutative Geometry*, 25:1, 113–146. DOI:<https://doi.org/10.4171/jncg/397>
56. G. Cortiñas, D. Montero. Homotopy classification of Leavitt path algebras. *Advances in Mathematics* 362 (2020) 106961. <https://doi.org/10.1016/j.aim.2019.106961>
57. G. Cortiñas, C. Weibel, Eds. K -theory in algebra, analysis and topology. *Contemporary Mathematics* 749, American Mathematical Society, 2020. ISBNs: 978-1-4704-5026-7 (print); 978-1-4704-5594-1 (online) DOI: <https://doi.org/10.1090/conm/749>
58. G. Cortiñas, R. Meyer, D. Mukherjee. Non-Archimedean analytic cyclic homology. *Documenta Mathematica* 25, 1353–1419. DOI: <https://www.elibm.org/article/10012061>
59. G. Arnone, G. Cortiñas. Nonexistence of graded unital homomorphisms between Leavitt algebras and their Cuntz splices. *J. of Algebra and its Applications*, 22(4), 230084 (2023). <https://doi.org/10.1142/S0219498823500846>.
60. G. Cortiñas, S. Vega. Bivariant Hermitian K -theory and Karoubi’s fundamental theorem. *Journal of Pure and Applied Algebra*, 226:12, 107124. doi:<https://doi.org/10.1016/j.jpaa.2022.107124>
61. G. Cortiñas. Classifying Leavitt path algebras up to involution preserving homotopy. *Mathematische Annalen*, 2022. doi:<https://doi.org/10.1007/s00208-022-02436-2>
62. G Cortiñas. Lifting graph C^* -algebra maps to Leavitt path algebra maps. *Bulletin of the London Mathematical Society*, 2022. doi:<http://doi.org/10.1112/blms.12686>
63. G. Cortiñas, Guido Arnone. Graded K -theory and Leavitt path algebras. *Journal of Algebraic Combinatorics*. <https://doi.org/10.1007/s10801-022-01184-5>
64. G. Cortiñas, Devarshi Mukherjee. A Quillen model structure of local homotopy equivalences. *Theory and Applications of Categories* 41 (2024) 268–287. <http://www.tac.mta.ca/tac/volumes/41/9/41-09.pdf>
65. G Cortiñas, D. Montero, M.E. Rodríguez. Simplicity of L^p -graph algebras. *Journal of Operator Theory*, 94:1 (2025), 93–109. DOI: doi: 10.7900/jot.2023aug30.2459
66. G. Cortiñas. Exel-Pardo algebras with a twist. *J. Noncommutative Geom.* 19:4 (2025), 1391–1441. DOI: <https://ems.press/journals/jncg/articles/14298047>
67. G. Cortiñas, R. Hazrat. Classification Conjectures for Leavitt path algebras. *Bulletin of the London Mathematical Society*, 2024, 56:10, 3011–3267. <https://doi.org/10.1112/blms.13139>
68. G. Arnone, G. Cortiñas, D. Mukherjee. Homology of Steinberg algebras. *Journal of the London Mathematical Society*, 113:5 e70566. DOI: <https://doi.org/10.1112/jlms.70566>

Preprints

69. G. Cortiñas, N.C. Phillips. Algebraic K -theory and properly infinite C^* -algebras. arXiv:1402.3197. Cited in 62, 65 and 66.
70. G. Cortiñas. Cyclic homology of H -unital (pro-) algebras, Lie algebra homology of matrices, and a paper of Hanlon’s. arXiv:math/0504148. Cited in 24.

Course notes

71. G. Cortiñas. Notas de Álgebra II. Cursos de grado, Fascículo 11, Departamento de Matemática, FCEyN, UBA, 2020. <http://cms.dm.uba.ar/depto/public/grado/fascgrado11.pdf>
72. G. Cortiñas. Álgebra II+I/2: Notas de Teoría de Álgebras. Cursos y Seminarios de Matemática, Serie B, Fascículo 13, Departamento de Matemática, FCEyN, UBA, 2020. <http://cms.dm.uba.ar/depto/public/serie%20B/serieB13.pdf>