

Artículos de Investigación

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Publicados o aceptados:

1. “Bernstein’s inequality and holonomicity for certain singular rings” (con Josep Àlvarez Montaner, Daniel J. Hernández, Jack Jeffries, Pedro Teixeira, y Emily E. Witt), aceptado en **Int. Math. Res. Not. IMRN**.
2. “Nash blowups of toric varieties in prime characteristic” (con Daniel Duarte y Jack Jeffries). aceptado en **Collect. Math.**
3. “Regularity index of the generalized minimum distance function” (con Carlos Espinosa-Valdéz y Yuriko Pitones), aceptado en **J. Pure Appl. Algebra**.
4. “Purity of monoids and characteristic-free splittings in semigroup rings” (con Alessandro De Stefani ay Jonathan Montaña), **Math. Z.**, 305 (2023), No. 2, Paper No. 31.
5. “Bernstein-Sato theory for singular rings in positive characteristic” (con Jack Jeffries y Eamon Quinlan Gallego), **Trans. Amer. Math. Soc.** 376 (2023), No. 7, 5123-5180.
6. “Frobenius methods in combinatorics” (con Alessandro De Stefani y Jonathan Montaña), **São Paulo J. Math. Sci.** 17 (2023), No. 1, 387-429.
7. “Poincaré series of multiplier and test ideals” (con Josep Àlvarez Montaner), **Rev. Mat. Iberoam.** 38 (2022), no. 6, 1993-2009.
8. “F-thresholds and test ideals of Thom-Sebastiani-Type polynomials” (con Delio Jaramillo-Velez y Manuel González Villa), **Proc. Amer. Soc.** 150 (2022), no. 9, 3739–3755.
9. “Bernstein-Sato polynomials in commutative algebra” (con Josep Àlvarez Montaner y Jack Jeffries), **Commutative Algebra**, 1-76, Springer, Cham, [2021].
10. “Functional equations, V-filtrations, and multiplier ideals of direct summands” (con Josep Àlvarez Montaner, Daniel J. Hernández, Jack Jeffries, Pedro Teixeira y Emily E. Witt), **Commun. Contemp. Math.** 24 (2022), no. 10, Paper No. 2150083, 47 páginas.
11. “Connectedness of square-free Groebner Deformations” (con Lilia Alanís-López y Pedro Ramírez-Moreno), **Proc. Amer. Math. Soc.** 150 (2022), no. 4, 1405-1419.
12. “Nash blowups in prime characteristic” (con Daniel Duarte), **Rev. Mat. Iberoam.** 38 (2022), no. 1, 257-267.
13. “F-volumes” (con Wágner Badilla-Céspedes y Sandra Rodríguez-Villalobos), **J. Algebra**, 595 (2022), 14-37.
14. “Bounds for the minimum distance function” (wcon Yuriko Pitones y Rafael H. Villarreal), **An. Ştiinţ. Univ. “Ovidius” Constanţa Ser. Mat.**, (2021), no. 3, 229-242.
15. “Higher Nash blowups of normal toric varieties in prime characteristic” (con Daniel Duarte), **Tohoku Math. J.**, (2) 73 (2021), no. 3, 449-462.
16. “Splittings and symbolic powers of square-free monomial Ideals” (con Jonathan Montaña), **Int. Math. Res. Not. IMRN**, (2021), No. 3, 2304-2320.

17. “Local cohomology and Lyubeznik numbers of F -pure rings” (con Alessandro De Stefani y Eloísa Grifo), **J. Algebra**, Vol. 571, (2021), 316-338.
18. “ Q -Hilbert functions of multiplier and test ideals”, (con Josep Àlvarez Montaner). Extended abstracts GEOMVAP 2019-geometry, topology, algebra, and applications; women in geometry and topology, 1 – 6, **Trends Math. Res. Perspect. CRM Barc.**, 15, Birkhäuser/Springer, Cham, (2021).
19. “ b -vectors of chordal graphs” (con Luis Pedro Montejano), **J. Commut. Algebra**, Vol. 12 (2020), No. 4, 539-557.
20. “Hilbert-Kunz multiplicities and F -thresholds” (con Ilya Smirnov), **Bol. Soc. Mat. Mex. (3)**, Vol. 26 (2020), No. 1, 15–25.
20. “Quantifying singularities with differetial operators” (con Holger Brenner y Jack Jeffries), **Adv. Math.**, Vol. 358 (2019), 106843, 89 pp.
21. “Connectedness and Lyubeznik numbers” (con Sandra Spiroff y Emily E. Witt). (2017), **Int. Math. Res. Not. IMRN**, (2019), no. 13, 4233–4259.
22. “Lyubeznik numbers and injective dimension of local cohomology modules” (con Daniel J. Hernández, Felipe Pérez y Emily E. Witt), **Trans. Amer. Math. Soc.**, Vol 371 (2019), No. 11, 7533-7557.
23. “Cohomological dimension, Lyubeznik numbers, and connectivity in mixed characteristic”, (con Daniel J. Hernández, Felipe Pérez y Emily E. Witt), **J. Algebra**, 514 (2018), 442-467.
24. “Symbolic powers of ideals” (con Hailong Dao, Alessandro De Stefani, Craig Huneke y Eloísa Grifo), Singularities and foliations. geometry, topology and applications, 387-432, **Springer Proc. Math. Stat.**, 222 (2018), Springer, Cham.
25. “On the existence of F -thresholds and related limits” (con Alessandro De Stefani y Felipe Pérez), **Trans. Amer. Math. Soc.**, Vol. 370 (2018), No. 9, 6629-6650.
26. “Footprint and minimum distance functions” (con Yuriko Pitones y Rafael Heraclio Villarreal), **Commun. Korean Math. Soc.**, Vol 33 (2018), No. 1, 85-101.
27. “Local m -adic constancy of F -pure thresholds and test ideals for hypersurfaces with isolated singularities”, (con Daniel J. Hernández y Emily E. Witt), **Math. Proc. Cambridge Philos. Soc.**, Vol. 164 (2018), No. 2, 285-295.
28. “ F -thresholds of graded rings” (con Alessandro De Stefani), **Nagoya Math. J.**, Vol. 229 (2018), 141-168.
29. “ D -modules, Bernstein-Sato polynomials, and F -invariants of direct summands” (con Josep Àlvarez-Montaner y Craig Huneke), **Adv. Math.**, Vol. 321 (2017), 298-325.
30. “Support of local cohomology modules over hypersurfaces and rings with FFRT” (con Mel Hochster), **Math. Res. Lett.**, Vol. 24 (2017), No. 2, 401-420.
31. “Graph connectivity and binomial edge ideals” (con Arindam Banerjee), **Proc. Amer. Math. Soc.**, Vol. 145 (2017), No. 2, 487-499.
32. “On the hyperhomology of the small gobelin for codimension 2” (con Xavier Gómez-Mont), **Bol. Soc. Mat. Mex. (3)**, Vol. 23 (2017), No. 2, 623-651.
33. “Frobenius Betti numbers and modules of finite projective dimension” (con Alessandro De Stefani, y Craig Huneke), **J. Commut. Algebra**, Vol. 9 (2017), No. 4, 455-490.
34. “ F -pure thresholds of homogeneous polynomials” (con Daniel J. Hernández, Emily E. Witt y Wenliang Zhang), **Michigan Math. J.**, Vol. 65 (2016), No. 1, 57-87.

35. "A survey on the Lyubeznik numbers"(con Emily E. Witt y Wenliang Zhang), **Contemp. Math.**, 657, **Aportaciones Mat.** Vol. 657 (2016), 154 – 181.
36. "A sufficient condition for strong F -regularity" (con Alessandro De Stefani), **Proc. Amer. Math. Soc.**, Vol. 144 2016, No. 1, 21-29.
37. " F -jumping and F -Jacobian ideals for hypersurfaces" (con Felipe Pérez), **J. Pure Appl. Algebra**, Vol. 220 (2016), No. 1, 292-318.
38. "Properties of Lyubeznik numbers under localization and polarization" (con Arindam Banerjee y Kohji Yanagawa), **J. Pure Appl. Algebra** 219 (2015), No. 11, 4872-4888.
39. "Generalized Lyubeznik numbers" (con Emily E. Witt), **Nagoya Math. J.**, Vol. 215 (2014), 168-202.
40. "Associated primes of local cohomology of flat extensions with regular fibers and Σ -finite D -modules", **J. Algebra**, Vol. 399 (2014), 770-781.
41. "Lyubeznik numbers in mixed characteristic" (con Emily E. Witt), **Math. Res. Lett.**, Vol. 20 (2013), No. 6, 1125-1143.
42. "Local cohomology modules of polynomial or power series rings over rings of small dimension", **Illinois J. Math.**, Vol. 57 (2013), No. 1, 279-294.
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44. "Local cohomology properties of direct summands", **J. Pure Appl. Algebra**, Vol. 216, (2012), No. 10, 2137-2140.
45. "Ideals with Larger Projective Dimension and Regularity" (con Jesse Beder, Jason McCullough, Alexandra Seceleanu, Bart Snapp y Branden Stone), **J. Symbolic Comput.**, Vol. 46 (2011), No. 10, 1105-1113.

Sometidos:

46. "Blowup algebras of determinantal ideals in prime characteristic." (con Alessandro De Stefani y Jonathan Montaña), preimpresión disponible en arXiv:2109.00592 [math.CA].
47. "Bernstein-Sato polynomial and related invariants for meromorphic functions" (con Josep Àlvarez Montaner, Manuel González Villa y Edwin León-Cardenal). preimpresión disponible en arXiv:2112.08492 [math.CV].
48. "Jumping numbers of F -pure submodules" (con Alessandro De Stefani, Daniel J. Henández y Emily E. Witt).
49. "Purity of monoids and characteristic-free splittings in semigroup rings" (con Alessandro De Stefani y Jonathan Montaña), preimpresión disponible en arXiv:2210.03358 [math.CA].
50. "Ladder determinantal varieties and their symbolic blowups" (with Alessandro De Stefani, Jonathan Montaña, Lisa Seccia y Matteo Varbaro), preimpresión disponible en arXiv:2305.18167 [math.CA].