

CONTRIBUCIONES RESULTANTES DE LAS TESIS DEL PROGRAMA DE DOCTORADO EN INVESTIGACIÓN MATEMÁTICA

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Se incluyen las contribuciones de los doctores cuyas tesis han sido leídas entre los cursos 2015-16 y 2019-20 a partir de la base de datos mathscinet. En negrita se ha marcado el apellido del doctor del programa.

CONTRIBUCIONES

- [1] G. Araújo, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, D. Núñez Alarcón, D. Pellegrino, J. B. Seoane-Sepúlveda, and D. M. Serrano-Rodríguez. On the polynomial Hardy-Littlewood inequality. *Arch. Math. (Basel)*, 104(3):259–270, 2015.
- [2] G. Araújo, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. Equivalent norms in polynomial spaces and applications. *J. Math. Anal. Appl.*, 445(2):1200–1220, 2017.
- [3] G. Araújo, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. Polynomial inequalities on the $\pi/4$ -circle sector. *J. Convex Anal.*, 24(3):927–953, 2017.
- [4] R. M. Aron, L. Bernal-González, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. On the size of special families of linear operators. *Linear Algebra Appl.*, 544:186–205, 2018.
- [5] J. M. Arrieta and M. **Villanueva-Pesqueira**. Fast and slow boundary oscillations in a thin domain. In *Advances in differential equations and applications*, volume 4 of *SEMA SIMAI Springer Ser.*, pages 13–22. Springer, Cham, 2014.
- [6] J. M. Arrieta and M. **Villanueva-Pesqueira**. Locally periodic thin domains with varying period. *C. R. Math. Acad. Sci. Paris*, 352(5):397–403, 2014.
- [7] J. M. Arrieta and M. **Villanueva-Pesqueira**. Thin domains with doubly oscillatory boundary. *Math. Methods Appl. Sci.*, 37(2):158–166, 2014.
- [8] J. M. Arrieta and M. **Villanueva-Pesqueira**. Unfolding operator method for thin domains with a locally periodic highly oscillatory boundary. *SIAM J. Math. Anal.*, 48(3):1634–1671, 2016.
- [9] J. M. Arrieta and M. **Villanueva-Pesqueira**. Thin domains with non-smooth periodic oscillatory boundaries. *J. Math. Anal. Appl.*, 446(1):130–164, 2017.
- [10] E. Artal Bartolo, L. **Gorrochategui**, I. Luengo, and A. Melle-Hernández. On some conjectures about free and nearly free divisors. In *Singularities and computer algebra*, pages 1–19. Springer, Cham, 2017.
- [11] L. Außenhofer and D. **de la Barrera** Mayoral. Linear topologies on \mathbb{Z} are not Mackey topologies. *J. Pure Appl. Algebra*, 216(6):1340–1347, 2012.
- [12] L. Außenhofer, D. **de la Barrera** Mayoral, D. Dikranjan, and E. Martín-Peinador. “Varopoulos paradigm”: Mackey property versus metrizability in topological groups. *Rev. Mat. Complut.*, 30(1):167–184, 2017.
- [13] D. Azagra, J. Ferrera, J. Gómez-Gil, and C. **Mudarra**. Extensions of convex functions with prescribed subdifferentials. *Studia Math.*, 253(2):199–213, 2020.
- [14] D. Azagra, E. Le Gruyer, and C. **Mudarra**. Explicit formulas for $C^{1,1}$ and $C_{\text{conv}}^{1,\omega}$ extensions of 1-jets in Hilbert and superreflexive spaces. *J. Funct. Anal.*, 274(10):3003–3032, 2018.
- [15] D. Azagra and C. **Mudarra**. An extension theorem for convex functions of class $C^{1,1}$ on Hilbert spaces. *J. Math. Anal. Appl.*, 446(2):1167–1182, 2017.
- [16] D. Azagra and C. **Mudarra**. Whitney extension theorems for convex functions of the classes C^1 and $C^{1,\omega}$. *Proc. Lond. Math. Soc. (3)*, 114(1):133–158, 2017.
- [17] D. Azagra and C. **Mudarra**. Global geometry and C^1 convex extensions of 1-jets. *Anal. PDE*, 12(4):1065–1099, 2019.
- [18] D. Azagra and C. **Mudarra**. Smooth convex extensions of convex functions. *Calc. Var. Partial Differential Equations*, 58(3):Paper No. 84, 27, 2019.
- [19] D. Azagra and C. **Mudarra**. Convex C^1 extensions of 1-jets from compact subsets of Hilbert spaces. *C. R. Math. Acad. Sci. Paris*, 358(5):551–556, 2020.

- [20] D. Azagra and C. **Mudarra**. Prescribing tangent hyperplanes to $C^{1,1}$ and $C^{1,\omega}$ convex hypersurfaces in Hilbert and superreflexive Banach spaces. *J. Convex Anal.*, 27(1):81–104, 2020.
- [21] M. Barbero-Liñán, M. **Farré Puiggalí**, S. Ferraro, and D. Martín de Diego. The inverse problem of the calculus of variations for discrete systems. *J. Phys. A*, 51(18):185202, 39, 2018.
- [22] M. Barbero-Liñán, M. **Farré Puiggalí**, and D. Martín de Diego. Isotropic submanifolds and the inverse problem for mechanical constrained systems. *J. Phys. A*, 48(4):045210, 35, 2015.
- [23] M. Barbero-Liñán, M. **Farré Puiggalí**, and D. Martín de Diego. Inverse problem for Lagrangian systems on Lie algebroids and applications to reduction by symmetries. *Monatsh. Math.*, 180(4):665–691, 2016.
- [24] E. A. Bartolo, S. **Isaza Peñaloza**, and M. A. Marco-Buzunáriz. Heegaard splittings of graph manifolds. *Ann. Mat. Pura Appl. (4)*, 198(3):727–747, 2019.
- [25] J. Bausch, T. S. Cubitt, A. **Lucia**, D. Perez-García, and M. M. Wolf. Size-driven quantum phase transitions. *Proc. Natl. Acad. Sci. USA*, 115(1):19–23, 2018.
- [26] G. Beer, M. I. Garrido, and A. S. **Meroño**. Uniform continuity and a new bornology for a metric space. *Set-Valued Var. Anal.*, 26(1):49–65, 2018.
- [27] L. Bernal-González, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. Non-Lipschitz differentiable functions on slit domains. *Rev. Mat. Complut.*, 30(2):269–279, 2017.
- [28] L. Bernal-González, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. On inequalities for convex functions. *J. Convex Anal.*, 26(2):437–448, 2019.
- [29] G. Botelho, V. V. Fávaro, D. Pellegrino, J. B. Seoane-Sepúlveda, and D. **Cariello**. On very non-linear subsets of continuous functions. *Q. J. Math.*, 65(3):841–850, 2014.
- [30] G. Botelho, D. **Cariello**, V. V. Fávaro, D. Pellegrino, and J. B. Seoane-Sepúlveda. Distinguished subspaces of L_p of maximal dimension. *Studia Math.*, 215(3):261–280, 2013.
- [31] F. G. S. L. Brandão, T. S. Cubitt, A. **Lucia**, S. Michalakis, and D. Perez-García. Area law for fixed points of rapidly mixing dissipative quantum systems. *J. Math. Phys.*, 56(10):102202, 15, 2015.
- [32] J. R. Campos, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, D. Pellegrino, and J. B. Seoane-Sepúlveda. On the real polynomial Bohnenblust-Hille inequality. *Linear Algebra Appl.*, 465:391–400, 2015.
- [33] A. Capel, A. **Lucia**, and D. Pérez-García. Quantum conditional relative entropy and quasi-factorization of the relative entropy. *J. Phys. A*, 51(48):484001, 41, 2018.
- [34] A. Capel, A. **Lucia**, and D. Pérez-García. Superadditivity of quantum relative entropy for general states. *IEEE Trans. Inform. Theory*, 64(7):4758–4765, 2018.
- [35] P. Carrasco Millán, M. A. **García-Ferrero**, F. J. Llanes-Estrada, A. Porrás Riojano, and E. M. Sánchez García. Shannon entropy and particle decays. *Nuclear Phys. B*, 930:583–596, 2018.
- [36] R. Casals, **Pérez, José Luis**, A. del Pino, and F. Presas. Existence h -principle for Engel structures. *Invent. Math.*, 210(2):417–451, 2017.
- [37] E. Celledoni, M. **Farré Puiggalí**, E. H. Hø iseth, and D. Martín de Diego. Energy-preserving integrators applied to nonholonomic systems. *J. Nonlinear Sci.*, 29(4):1523–1562, 2019.
- [38] J. W. Cholewa, C. **Quesada**, and A. Rodríguez-Bernal. Nonlinear evolution equations in scales of Banach spaces and applications to PDEs. *J. Abstr. Differ. Equ. Appl.*, 8(2):1–69, 2017.
- [39] J. I. Cirac, J. **Garre-Rubio**, and D. Pérez-García. Mathematical open problems in projected entangled pair states. *Rev. Mat. Complut.*, 32(3):579–599, 2019.
- [40] F. Cobos and O. **Domínguez**. Embeddings of Besov spaces of logarithmic smoothness. *Studia Math.*, 223(3):193–204, 2014.
- [41] F. Cobos and O. **Domínguez**. Approximation spaces, limiting interpolation and Besov spaces. *J. Approx. Theory*, 189:43–66, 2015.
- [42] F. Cobos and O. **Domínguez**. On Besov spaces of logarithmic smoothness and Lipschitz spaces. *J. Math. Anal. Appl.*, 425(1):71–84, 2015.
- [43] F. Cobos and O. **Domínguez**. On Besov spaces modelled on Zygmund spaces. *J. Approx. Theory*, 211:61–77, 2016.
- [44] F. Cobos and O. **Domínguez**. On the relationship between two kinds of Besov spaces with smoothness near zero and some other applications of limiting interpolation. *J. Fourier Anal. Appl.*, 22(5):1174–1191, 2016.
- [45] F. Cobos, O. **Domínguez**, and T. Kühn. Approximation and entropy numbers of embeddings between approximation spaces. *Constr. Approx.*, 47(3):453–486, 2018.
- [46] F. Cobos, O. **Domínguez**, and T. Kühn. On nuclearity of embeddings between Besov spaces. *J. Approx. Theory*, 225:209–223, 2018.

- [47] F. Cobos, O. **Domínguez**, and A. Martínez. Compact operators and approximation spaces. *Colloq. Math.*, 136(1):1–11, 2014.
- [48] F. Cobos, O. **Domínguez**, and H. Triebel. Characterizations of logarithmic Besov spaces in terms of differences, Fourier-analytical decompositions, wavelets and semi-groups. *J. Funct. Anal.*, 270(12):4386–4425, 2016.
- [49] L. J. Colombo, D. Martín de Diego, A. Nayak, and R. T. Sato Martín de **Almagro**. Geometric optimal trajectory tracking of nonholonomic mechanical systems. *SIAM J. Control Optim.*, 58(3):1652–1675, 2020.
- [50] J. A. Conejero, P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. When the identity theorem “seems” to fail. *Amer. Math. Monthly*, 121(1):60–68, 2014.
- [51] T. S. Cubitt, A. **Lucia**, S. Michalakis, and D. Perez-García. Stability of local quantum dissipative systems. *Comm. Math. Phys.*, 337(3):1275–1315, 2015.
- [52] D. M. de Diego and R. S. M. de **Almagro**. Variational order for forced Lagrangian systems. *Nonlinearity*, 31(8):3814–3846, 2018.
- [53] R. Deville and C. **Mudarra**. Approximation of Lipschitz functions preserving boundary values. *J. Optim. Theory Appl.*, 182(3):885–905, 2019.
- [54] A. Enciso, M. A. **García-Ferrero**, and D. Peralta-Salas. The Biot-Savart operator of a bounded domain. *J. Math. Pures Appl. (9)*, 119:85–113, 2018.
- [55] A. Enciso, M. A. **García-Ferrero**, and D. Peralta-Salas. Minimal graphs with micro-oscillations. *J. Differential Equations*, 265(8):3339–3344, 2018.
- [56] A. Enciso, M. A. **García-Ferrero**, and D. Peralta-Salas. Approximation theorems for parabolic equations and movement of local hot spots. *Duke Math. J.*, 168(5):897–939, 2019.
- [57] M. I. Garrido and A. S. **Meroño**. The Samuel realcompactification of a metric space. *J. Math. Anal. Appl.*, 456(2):1013–1039, 2017.
- [58] M. I. Garrido and A. S. **Meroño**. The Samuel realcompactification. *Topology Appl.*, 241:150–161, 2018.
- [59] A. Giraldo, M. A. Morón, and A. **Sánchez-González**. Ultrametrics on Čech homology groups. *Topology Appl.*, 258:549–571, 2019.
- [60] G. Griso and M. **Villanueva-Pesqueira**. Straight rod with different order of thickness. *Asymptot. Anal.*, 94(3-4):255–291, 2015.
- [61] A. Hohti, H. Junnila, and A. S. **Meroño**. On strongly Čech-complete spaces. *Topology Appl.*, 284:107348, 19, 2020.
- [62] B. Ivorra, M. R. Ferrández, M. **Crespo**, J. L. Redondo, P. M. Ortigosa, J. G. Santiago, and A. M. Ramos. Modelling and optimization applied to the design of fast hydrodynamic focusing microfluidic mixer for protein folding. *J. Math. Ind.*, 8:Paper No. 4, 17, 2018.
- [63] M. J. Kastoryano and A. **Lucia**. Divide and conquer method for proving gaps of frustration free Hamiltonians. *J. Stat. Mech. Theory Exp.*, (3):033105, 23, 2018.
- [64] M. J. Kastoryano, A. **Lucia**, and D. Perez-García. Locality at the boundary implies gap in the bulk for 2D PEPS. *Comm. Math. Phys.*, 366(3):895–926, 2019.
- [65] D. Martín de Diego and R. T. S. Martín de **Almagro**. Variational order for forced Lagrangian systems II. Euler-Poincaré equations with forcing. *Nonlinearity*, 33(8):3709–3738, 2020.
- [66] V. Muñoz and J. A. **Rojo**. Symplectic resolution of orbifolds with homogeneous isotropy. *Geom. Dedicata*, 204:339–363, 2020.
- [67] V. Muñoz, J. A. **Rojo**, and A. Tralle. Homology Smale-Barden manifolds with K-contact but not Sasakian structures. *Int. Math. Res. Not. IMRN*, (21):7397–7432, 2020.
- [68] F. Ortega, R. Lara-Cabrera, A. **González-Prieto**, and J. Bobadilla. Providing reliability in recommender systems through Bernoulli matrix factorization. *Inform. Sci.*, 553:110–128, 2021.
- [69] D. Panholi, **Pérez, José Luis**, and F. Presas. A simple construction of positive loops of Legendrians. *Ark. Mat.*, 56(2):377–394, 2018.
- [70] L. u. Pi ociniczak, W. Okrasiński, J. J. Nieto, and O. **Domínguez**. On a nonlinear boundary value problem modeling corneal shape. *J. Math. Anal. Appl.*, 414(1):461–471, 2014.
- [71] E. Sánchez-Burillo, A. **Cadarso**, L. Martín-Moreno, J. J. García-Ripoll, and D. Zueco. Emergent causality and the N -photon scattering matrix in waveguide QED. *New J. Phys.*, 20(January):013017, 20, 2018.
- [72] **Aleja**, D. and J. López-Gómez. Concentration through large advection. *J. Differential Equations*, 257(9):3135–3164, 2014.
- [73] **Aleja**, D. and J. López-Gómez. Dynamics of a class of advective-diffusive equations in ecology. *Adv. Nonlinear Stud.*, 15(3):557–585, 2015.

- [74] **Aleja**, David and J. López-Gómez. Some paradoxical effects of the advection on a class of diffusive equations in ecology. *Discrete Contin. Dyn. Syst. Ser. B*, 19(10):3031–3056, 2014.
- [75] **H. Barge**. Regular blocks and Conley index of isolated invariant continua in surfaces. *Nonlinear Anal.*, 146:100–119, 2016.
- [76] **H. Barge**, A. Giraldo, and J. M. R. Sanjurjo. Bifurcations, robustness and shape of attractors of discrete dynamical systems. *J. Fixed Point Theory Appl.*, 22(2):Paper No. 29, 13, 2020.
- [77] **H. Barge** and J. M. R. Sanjurjo. Unstable manifold, Conley index and fixed points of flows. *J. Math. Anal. Appl.*, 420(1):835–851, 2014.
- [78] **H. Barge** and J. M. R. Sanjurjo. Fixed points, bounded orbits and attractors of planar flows. In *A mathematical tribute to Professor José María Montesinos Amilibia*, pages 125–132. Dep. Geom. Topol. Fac. Cien. Mat. UCM, Madrid, 2016.
- [79] **H. Barge** and J. M. R. Sanjurjo. Bifurcations and attractor-repeller splittings of non-saddle sets. *J. Dynam. Differential Equations*, 30(1):257–272, 2018.
- [80] **H. Barge** and J. M. R. Sanjurjo. Flows in \mathbb{R}_+^2 without interior fixed points, global attractors and bifurcations. *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM*, 112(3):671–683, 2018.
- [81] **H. Barge** and J. M. R. Sanjurjo. Dissipative flows, global attractors and shape theory. *Topology Appl.*, 258:392–401, 2019.
- [82] **H. Barge** and J. M. R. Sanjurjo. A Conley index study of the evolution of the Lorenz strange set. *Phys. D*, 401:132162, 11, 2020.
- [83] **H. Barge** and J. M. R. Sanjurjo. Dissonant points and the region of influence of non-saddle sets. *J. Differential Equations*, 268(9):5329–5352, 2020.
- [84] **H. Barge** and K. Wójcik. Mayer-Vietoris property of the fixed point index. *Topol. Methods Nonlinear Anal.*, 50(2):643–667, 2017.
- [85] **A. Bautista**, A. Ibort, and J. Lafuente. On the space of light rays of a spacetime and a reconstruction theorem by Low. *Classical Quantum Gravity*, 31(7):075020, 24, 2014.
- [86] **A. Bautista**, A. Ibort, and J. Lafuente. Causality and skies: is non-refocussing necessary? *Classical Quantum Gravity*, 32(10):105002, 24, 2015.
- [87] **A. Bautista**, A. Ibort, and J. Lafuente. The contact structure in the space of light rays. In *A mathematical tribute to Professor José María Montesinos Amilibia*, pages 133–159. Dep. Geom. Topol. Fac. Cien. Mat. UCM, Madrid, 2016.
- [88] **A. Bautista**, A. Ibort, and J. Lafuente. L-extensions and L-boundary of conformal spacetimes. *Gen. Relativity Gravitation*, 50(12):Paper No. 153, 47, 2018.
- [89] **A. Bautista**, A. Ibort, J. Lafuente, and R. Low. A conformal boundary for space-times based on light-like geodesics: the 3-dimensional case. *J. Math. Phys.*, 58(2):022503, 26, 2017.
- [90] **D. Cariello**. Separability for weakly irreducible matrices. *Quantum Inf. Comput.*, 14(15-16):1308–1337, 2014.
- [91] **D. Cariello**. Does symmetry imply PPT property? *Quantum Inf. Comput.*, 15(9-10):812–824, 2015.
- [92] **D. Cariello**. Completely reducible maps in quantum information theory. *IEEE Trans. Inform. Theory*, 62(4):1721–1732, 2016.
- [93] **D. Cariello**. A gap for PPT entanglement. *Linear Algebra Appl.*, 529:89–114, 2017.
- [94] **D. Cariello**. Sinkhorn-Knopp theorem for PPT states. *Lett. Math. Phys.*, 109(9):2013–2034, 2019.
- [95] **D. Cariello**. Sinkhorn-Knopp theorem for rectangular positive maps. *Linear Multilinear Algebra*, 67(11):2345–2365, 2019.
- [96] **D. Cariello**, V. V. Fávaro, and J. B. Seoane-Sepúlveda. Self-similar functions, fractals and algebraic genericity. *Proc. Amer. Math. Soc.*, 145(10):4151–4159, 2017.
- [97] **D. Cariello** and J. B. Seoane-Sepúlveda. Basic sequences and spaceability in ℓ_p spaces. *J. Funct. Anal.*, 266(6):3797–3814, 2014.
- [98] **M. Crespo**, B. Ivorra, and A. M. Ramos. Existence and uniqueness of solution of a continuous flow bioreactor model with two species. *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM*, 110(2):357–377, 2016.
- [99] **M. Crespo**, B. Ivorra, and A. M. Ramos. Asymptotic stability of a coupled advection-diffusion-reaction system arising in bioreactor processes. *Electron. J. Differential Equations*, pages Paper No. 194, 26, 2017.
- [100] **M. Crespo**, B. Ivorra, A. M. Ramos, and A. Rapaport. Shape optimization of spatial chemostat models. *Electron. J. Differential Equations*, pages Paper No. 84, 26, 2019.
- [101] **M. Crespo**, A. Majumdar, A. M. Ramos, and I. M. Griffiths. Solution landscapes in nematic microfluidics. *Phys. D*, 351/352:1–13, 2017.

- [102] D. de la Barrera Mayoral. \mathbb{Q} is not a Mackey group. *Topology Appl.*, 178:265–275, 2014.
- [103] D. de la Barrera Mayoral. Non metrizable topologies on \mathbb{Z} with countable dual group. *Appl. Gen. Topol.*, 18(1):31–44, 2017.
- [104] O. Domínguez. Tractable embeddings of Besov spaces into small Lebesgue spaces. *Math. Nachr.*, 289(14-15):1739–1759, 2016.
- [105] O. Domínguez. Sharp embeddings of Besov spaces with logarithmic smoothness in sub-critical cases. *Anal. Math.*, 43(2):219–240, 2017.
- [106] O. Domínguez. Ul’yanov-type inequalities and embeddings between Besov spaces: the case of parameters with limit values. *Math. Inequal. Appl.*, 20(3):755–772, 2017.
- [107] O. Domínguez. Sharp estimates of the norms of embeddings between Besov spaces. *Z. Anal. Anwend.*, 37(2):127–149, 2018.
- [108] M. Farré Puiggali and A. M. Bloch. An extension to the theory of controlled Lagrangians using the Helmholtz conditions. *J. Nonlinear Sci.*, 29(2):345–376, 2019.
- [109] M. Farré Puiggali and T. Mestdag. The inverse problem of the calculus of variations and the stabilization of controlled Lagrangian systems. *SIAM J. Control Optim.*, 54(6):3297–3318, 2016.
- [110] S. Fernández-Rincón and J. López-Gómez. A singular perturbation result in competition theory. *J. Math. Anal. Appl.*, 445(1):280–296, 2017.
- [111] S. Fernández-Rincón and J. López-Gómez. Spatial versus non-spatial dynamics for diffusive Lotka-Volterra competing species models. *Calc. Var. Partial Differential Equations*, 56(3):Paper No. 71, 37, 2017.
- [112] S. Fernández-Rincón and J. López-Gómez. Spatially heterogeneous Lotka-Volterra competition. *Nonlinear Anal.*, 165:33–79, 2017.
- [113] S. Fernández-Rincón and J. López-Gómez. The singular perturbation problem for a class of generalized logistic equations under non-classical mixed boundary conditions. *Adv. Nonlinear Stud.*, 19(1):1–27, 2019.
- [114] S. Fernández-Rincón and J. López-Gómez. The Picone identity: a device to get optimal uniqueness results and global dynamics in population dynamics. *Nonlinear Anal. Real World Appl.*, 60:103285, 41, 2021.
- [115] M. A. García-Ferrero, D. Gómez-Ullate, and R. Milson. A Bochner type characterization theorem for exceptional orthogonal polynomials. *J. Math. Anal. Appl.*, 472(1):584–626, 2019.
- [116] M. A. García-Ferrero, D. Gómez-Ullate, and R. Milson. Exceptional Legendre polynomials and confluent Darboux transformations. *SIGMA Symmetry Integrability Geom. Methods Appl.*, 17:016, 19 pages, 2021.
- [117] M. A. García-Ferrero and A. Rüländ. Strong unique continuation for the higher order fractional Laplacian. *Math. Eng.*, 1(4):715–774, 2019.
- [118] M. A. García-Ferrero and A. Rüländ. On two methods for quantitative unique continuation results for some nonlocal operators. *Comm. Partial Differential Equations*, 45(11):1512–1560, 2020.
- [119] J. Garre-Rubio and S. Iblisdir. Local order parameters for symmetry fractionalization. *New J. Phys.*, 21(November):113016, 16, 2019.
- [120] A. González-Prieto. Virtual classes of parabolic $SL_2(\mathbb{C})$ -character varieties. *Adv. Math.*, 368:107148, 41, 2020.
- [121] A. González-Prieto, M. Logares, and V. Muñoz. A lax monoidal topological quantum field theory for representation varieties. *Bull. Sci. Math.*, 161:102871, 34, 2020.
- [122] L. Gorrochategui Gregorio. Monodromy conjecture and the Hessian differential form. *Topology Appl.*, 234:452–456, 2018.
- [123] P. Jiménez-Rodríguez. On sequences not enjoying Schur’s property. *Open Math.*, 15(1):233–237, 2017.
- [124] P. Jiménez-Rodríguez. Searching for structures inside of the family of bounded derivatives which are not Riemann integrable. *Taiwanese J. Math.*, 22(6):1427–1433, 2018.
- [125] P. Jiménez-Rodríguez, S. Maghsoudi, and G. A. Muñoz Fernández. Convolution functions that are nowhere differentiable. *J. Math. Anal. Appl.*, 413(2):609–615, 2014.
- [126] P. Jiménez-Rodríguez, S. Maghsoudi, G. A. Muñoz Fernández, and J. B. Seoane-Sepúlveda. Injective mappings in $\mathbb{R}^{\mathbb{R}}$ and lineability. *Bull. Belg. Math. Soc. Simon Stevin*, 23(4):609–623, 2016.
- [127] P. Jiménez-Rodríguez, G. A. Muñoz Fernández, M. Murillo-Arcila, and J. B. Seoane-Sepúlveda. Sharp values for the constants in the polynomial Bohnenblust-Hille inequality. *Linear Multilinear Algebra*, 64(9):1731–1749, 2016.

- [128] P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, D. Pellegrino, and J. B. Seoane-Sepúlveda. Bernstein-Markov type inequalities and other interesting estimates for polynomials on circle sectors. *Math. Inequal. Appl.*, 20(1):285–300, 2017.
- [129] P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, E. Sáez-Maestro, and J. B. Seoane-Sepúlveda. Algebraic genericity and the differentiability of the convolution. *J. Approx. Theory*, 241:86–106, 2019.
- [130] P. **Jiménez-Rodríguez**, G. A. Muñoz Fernández, E. Sáez-Maestro, and J. B. Seoane-Sepúlveda. The convolution of two differentiable functions on the circle need not be differentiable. *Rev. Mat. Complut.*, 32(1):187–193, 2019.
- [131] **Navarro, A.** On Grothendieck’s Riemann-Roch theorem. *Expo. Math.*, 35(3):326–342, 2017.
- [132] **Navarro, A.** Riemann-Roch for homotopy invariant K -theory and Gysin morphisms. *Adv. Math.*, 328:501–554, 2018.
- [133] **Navarro, A.**, J. Navarro, and C. Tejero Prieto. Natural operations on holomorphic forms. *Arch. Math. (Brno)*, 54(4):239–254, 2018.
- [134] P. **Portilla Cuadrado**. Positive factorizations of pseudoperiodic homeomorphisms. *Math. Ann.*, 379(3-4):1173–1203, 2021.
- [135] P. **Portilla Cuadrado** and B. Sigurðsson. Mixed tête-à-tête twists as monodromies associated with holomorphic function germs. *Geom. Dedicata*, 210:43–64, 2021.
- [136] C. **Quesada** and A. Rodríguez-Bernal. Perturbation of analytic semigroups in uniform spaces in \mathbb{R}^N . In *Advances in differential equations and applications*, volume 4 of *SEMA SIMAI Springer Ser.*, pages 41–52. Springer, Cham, 2014.
- [137] C. **Quesada** and A. Rodríguez-Bernal. Smoothing and perturbation for some fourth order linear parabolic equations in \mathbb{R}^N . *J. Math. Anal. Appl.*, 412(2):1105–1134, 2014.
- [138] C. **Quesada** and A. Rodríguez-Bernal. Second order linear parabolic equations in uniform spaces in \mathbb{R}^N . *Rev. Mat. Complut.*, 30(1):63–78, 2017.