

Maria Rosaria Lancia's Articles indexed in WOS or SCOPUS

1. M.R.Lancia (in coll. with S.Creo) "Dynamical boundary conditions for time-dependent fractional operators on extension domains". ADVANCES in DIFFERENTIAL EQUATIONS, 29:9-10(2024), 727-756 (2024).
2. M.R.Lancia (in coll. con S.Creo), " The p-curl system in extension domains, DCDS-s, 17,2208-2223, (2024).
3. M.R.Lancia (in coll. with M.Cefalo, S.Creo and J. Rodriguez Cuadrado)"Fractal mixtures for optimal heat draining, Chaos Solitons and Fractals,, 173, 1-11, (2023).
4. M.R.Lancia (in coll. with R.Capitanelli and S.Creo)" Asymptotics for time fractional Venttsel'problems in fractal domains", Fractal. Fract. 2023, 7, 479, (2023).
5. M. R. Lancia (in coll. with P.Vernole), " Nonautonomous semilinear Wentzell problems in fractal domains",J. Evol. Equ. 22, 88 (2022).
6. M. R. Lancia (in coll. with S.Creo, and P.Vernole)," Transmission problems for the fractional p-Laplacian across fractal interfaces",DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS. SERIES S. 12 3621-3644 (2022).
7. M.R.Lancia (in coll. con S.Creo), "Fractional (s,p)-Robin-Venttsel' problems on extension domains", NoDEA Nonlinear Differential Equations Appl., 28 (3), paper no. 31, 33 pp., (2021).
8. M. R. Lancia (in coll. with S.Creo, and P.Vernole)," M-Convergence of p-fractional energies in irregular domains", J. Convex Anal., 28, 2, 509-534, (2021).
9. M.R.Lancia (in coll. with S.Creo, and A. I. Nazarov)," Regularity results for nonlocal evolution Venttsel' problems", Fract. Calc. Appl. Anal., 23 (5), 1416-1430, (2020).
10. M.R.Lancia (in coll. with S.Creo, and P.Vernole),"Convergence of fractional diffusion processes on extension domains" , J. Evol. Equ. 20, 109 – 139, (2020).
11. M.R.Lancia (in coll. with S.Creo)," Friedrichs inequality in irregular domains", J. Math. Anal. Appl., 484, 109-139, (2020).
12. M.R.Lancia (in coll. with M.Cefalo, S.Creo, and P.Vernole), "Nonlocal Venttsel' diffusion in fractal-type domains: regularity results and numerical approximation". Math. M. in Appl. Sciences,14, 4712-4733, (2019).
13. M.R.Lancia (in coll. with A. Velez-Santiago and P.Vernole)," A quasi-linear nonlocal Venttsel' problem of Ambrosetti–Prodi type on fractal domains", DCDS-A, 39, 4487-4518, (2019).
14. M.R.Lancia (in coll. with P.Vernole) " The Stokes problem in fractal domains: asymptotic behaviour of the solutions", DCDS-S, 13,1553-1565, (2020).

15. M.R.Lancia (in coll. with S.Creo, A. Nazarov and P.Vernole), "On two-dimensional nonlocal Venttsel' problems in piecewise smooth domains", *Discrete Cont. Dyn. Syst. Series S*, 12 (1), 57-64, (2019).
16. M.R.Lancia (in coll. with M.Hinz, A.Teplyaev and P.Vernole) "Fractal snowflake domain diffusion with boundary and interior drifts". *JMAA*, **457**, 672-693, (2018).
17. M.R.Lancia (in coll. with S.Creo, A. Velez-Santiago and P.Vernole), "Approximation of a nonlinear fractal energy functional on varying Hilbert spaces". *Commun. Pure Appl. Anal.*, 17, no. 2, 647-669, (2018).
18. M.R.Lancia (in coll. with A. Velez-Santiago and P.Vernole), "Quasi-linear Venttsel problems with nonlocal boundary conditions on fractal domains". *Non Linear Analysis Real world applications*, 35, 265-291, (2017).
19. M.R.Lancia (in coll. with V. regis Durante, P.Vernole), "Asymptotics for Venttsel' problems for operators in non divergence form in irregular domains", *Disc. Continuous Dynamical Systems* 9,n.5,1493-1520, (2016).
20. M.R.Lancia (in coll. with V. Regis Durante, P.Vernole), "Density results for energy spaces on some fractafolds." *Z. Anal. Anwend.* 34, 357-372, (2015).
21. M.R.Lancia (in coll with M.Cefalo) "An optimal mesh generation algorithm for domains with Koch type boundaries." *Math. Comput. Simulation* 106, 133-162, (2014).
22. M.R.Lancia (in coll. with P.Vernole), "Venttsel' problems in fractal domains" *J. Evol. Equ.* 14, 681-712, (2014).
23. M.R.Lancia (in coll with R.Capitanelli and M.A.Vivaldi,), "Insulating layers of fractal type" *Differential and Integral equations.* 26,1055-1076, (2013).
24. M.R.Lancia (in coll with M.Cefalo and H.Liang,), "Heat flow problems across fractal mixtures: regularity results and numerical approximation" *Differential and Integral equations.* 26, 1027-1054, (2013).
25. M.R.Lancia (in coll. with P.Vernole) "Semilinear fractal problems: approximation and regularity results" *Nonlinear Anal.*, 80, 216-232, (2013).
26. M.R.Lancia (in coll. with P.Vernole) "Semilinear evolution transmission problems across fractal layers" *NonLinear Analysis T.M.A.*, **75**, 4222-4240, (2012).
27. M.R. Lancia (in coll. with G. Dell'Acqua and Massimo Cefalo) "Numerical approximation of transmission problems across Koch-type highly conductive layers. *Applied Math. and Comp.*, **218**, 9, 5453-5473, (2012).
28. M.R.Lancia (in coll. with P.Vernole) "Irregular heat flow problems." *SIAM Journal on Mathematical Analysis*, **42**, no.4, 1539-1567, (2010).
29. M.R.Lancia (in coll. with U.Mosco e M.A.Vivaldi), "Homogeneization for conductive thin layers of prefractal type", *JMAA*, **347**, 354-369, (2008).
30. M.R.Lancia (in coll. with J.Masamune), "The Liouville property of unbounded fractal layers" *Complex Variables and Elliptic Equations*, **53**, 4: 297-306, (2008).
31. M.R.Lancia (in coll. with U.Freiberg), "Energy forms on conformal C^1 diffeomorphic images of the Sierpinski Gasket", *Math. Nachr.* **3**: 337-349, (2008).

32. M.R.Lancia, "On some second order trasmission problems", *Arabian Journal for science and engineering*, Special issue: Wavelet and fractal methods in science and engineering, **29-2C**, 85-100, (2004).
33. M.R.Lancia (in coll. with U.Freiberg), "Energy forms on a closed fractal curve", *Zeitschrift für Analysis und ihre Anwendungen*, **23**, 115-137, (2004).
34. M.R.Lancia (in coll. with R.Capitanelli), "Nonlinear energy forms and Lipschitz spaces on the infinite Koch curve", *Arabian Journal for science and engineering*. Special issue "Wavelet and fractal methods in science and engineering". **29-2C**, 101-110, (2004).
35. M.R.Lancia, " A Trasmission problem with a fractal interface", *Zeitschrift für Analysis und ihre Anwendungen* **21**, 1, 113-133, (2002).
36. M.R.Lancia (in coll. with R.Capitanelli), "Nonlinear energy forms and Lipschitz spaces on the Koch curve", *Journal of Convex Analysis*. **9**, 2, 245-257, (2002).
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39. M.R.Lancia (in coll. with P. Podio-Guidugli, G. Vergara Caffarelli), "Gleanings of Radial Cavitation", *Journal of elasticity* , **44** 183-192, (1996).
40. M.R.Lancia (in coll. with P. Bassanini, C.M. Casciola, R. Piva), "Uniqueness of the bounded flow solution in aerodynamics", *Comp.Mech.* **22**, 12-18, (1998).
41. M.R.Lancia (in coll. with P. Bassanini, C.M. Casciola, R. Piva), "A theoretical model for multiply connected wings", *European Journal of Applied Mathematics* , **9**, 6, 607-634, (1998).
42. M.R.Lancia (in coll. with P. Bassanini, C.M. Casciola, R. Piva), "Edge singularity and Kutta condition in 3D aerodynamics", *Meccanica* **34** , 199-229, (1999).
43. M.R.Lancia (in coll. with P.Bassanini, C.M. Casciola, R. Piva), "On the trailing edge singularity and Kutta condition for 3D airfoils", *Eur. Jour. of Mech. B/fluids* **15** , 6, 809-830, (1996).
44. M.R.Lancia (in coll. with P. Podio-Guidugli, G. Vergara Caffarelli), "Null Lagrangians in Linear Elasticity ", *Mathematical Models and Methods in Applied Sciences* **3** 5, 415-427, (1995) .
45. M.R.Lancia (in coll. with P. Bassanini), " Boundary Integral Equations of the First Kind for Planar Vector Fields in Multiply Connected Domains". *Acta Mechanica* **94**, 1-2, 43-57, (1992).
46. M.R.Lancia (in coll. with P.Bassanini, C.M. Casciola, R. Piva), "A Boundary Integral formulation for the Kinetic Field in Aerodynamics. Part II: Applications to 2D Unsteady Flows". *Eur. J. Mech., B/Fluids*, **1**, n. 3 , (1992).
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1. M.R.Lancia, "Parabolic transmission problems across irregular layers", Proc. of the International Symposium : Problemi attuali dell'analisi e della fisica matematica, Taormina 29 giugno-1 luglio 2006, *Le Matematiche* LXII: 271-287, (2007).
2. M.R.Lancia (in coll. con U.Freiberg), "Energy forms on non self-similar fractals", Proc. of the fifth European conference on elliptic and parabolic problems: a special tribute to the work of H.Brezis, 2004, Gaeta, Italy, Progress in Nonlinear differential equations and their applications, **63**, 267-277, (2005).
3. M.R.Lancia (in coll. Bassanini P., Casciola C.M., Piva R.), "Edge singularity and Kutta condition for 3D unsteady flows in aerodynamics" in *Integral equations and nonsmooth domains* special volume dedicated to V.G.Maz'ya on his 60th birthday. (W.Wendland Ed.) Proc. *IABEM98*, Inter. Symp. on Boundary element methods, Ecole Polytechnique Palaiseau, Magglio 1998; Pittman Res. Notes in Math. (1999).
4. M.R.Lancia (in coll. Bassanini P., Casciola C.M., Piva R.), "On the removal of the trailing edge singularity in 3D flows". *IABEM Symposium on Boundary Integral Methods for Non-linear Problems* (Morino L. & Wendland WL. Eds.) Siena, May 1995, Kluwer Academic Publishers 1-6, (1997).
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1. M. R. Lancia (in coll. with M.Cefalo, S.Creo, M. Gallo, and P.Vernole), Approximation of 3D Stokes flows in fractal domains, SEMA SIMAI Springer Series 8, 27-53, (2021).
2. M.R.Lancia (in coll. with S.Creo, M.Hinz, A.Teplyaev and P.Vernole) "Magnetostatic Problems in fractal domains". in *Fractals and Dynamics in Mathematics, Science and the Arts* published by World Scientific. Volume 5: Analysis, Probability and Mathematical Physics on Fractals, 477-502, (2020,). https://doi.org/10.1142/9789811215537_015

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1. M.R.Lancia (in coll. con P.Vernole) "Semilinear Venttsel' Problems in Fractal Domains", *Applied Mathematics*, Vol.5 No.12, , 1820-1833, (2014). DOI: 10.4236/am.2014.512175
2. M.R.Lancia (in coll. con P.Vernole) Semilinear Evolution Problems with Ventcel-Type Conditions on Fractal Boundaries, *International Journal of Partial Differential Equations* (2014), Article ID 461046, 13 pages, (2014). <http://dx.doi.org/10.1155/2014/461046>
3. M.R.Lancia (in coll. con E.Vacca), "Numerical approximation of heat flow problems across highly conductive layers", in Special volume on "Mathematical modeling of bodies with complicated bulk and boundary behavior", *Quaderni di Matematica*, Seconda Universita degli Studi di Napoli, (2008).
4. M.R.Lancia, "Second order transmission problems across a fractal surface", *Rend. Acc. Naz. dei XL*, Vol. XXVII, 237-251, (2003).

5. M.R. Lancia (in coll. con P.Vernole), "Convergence results for parabolic transmission problems across highly conductive layers with small capacity", *Adv. Math.Sci. Appl.* **16** (2):411-445, (2006).
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7. M.R.Lancia (in coll. con M.A.Vivaldi), "On the regularity of the solutions for transmission problems". *Advances in Mathematical Sciences and Applications* **13**, 1, 455-466, (2002).
8. M.R.Lancia (in coll. con M.A.Vivaldi), "Lipschitz spaces and Besov traces on self-similar fractals", *Rend.Acc. Naz. dei XL*, vol. XXIII, 101-116, (1999).
9. M.R.Lancia (in coll. con M.V.Marchi), "Harnack inequality and Hölder regularity of solutions for Hörmander type operators", *Advances in Mathematical Sciences and Applications* **7**, 2, 833-857, (1997).
10. M.R.Lancia (in coll. C.M Casciola), "A Variational Approach for Boundary Integral Equations in Potential Aerodynamics". *Rendiconti di Matematica*, vol. **9**, 701-717, (1989).

Proceedings peer reviewed on non indexed books

1. M.R.Lancia (in coll. P.Bassanini, C.M. Casciola , R. Piva), "Uniqueness of the bounded flow solution in aerodynamics", Proc. IABEM workshop on *Fundamental solutions in Boundary element methods: formulation and integrations* (L.Benitez ed.) 243-253 June 1997, Università di Siviglia; June (1997).
2. M.R.Lancia (in coll. P.Bassanini, C.M.Casciola, R. Piva), "Numerical Approximation of Boundary Integral Equations in Three Dimensional Aerodynamics". *Boundary Element Methods Fundamentals and Applications* (S.Kobayashi, N.Nishimura eds.) Proc. IABEM91, Kyoto Ottobre 1991; Springer Verlag 41-48, (1992).
3. M.R.Lancia (in coll. P. Bassanini, C.M. Casciola , R. Piva), "A General Integral Formulation for Rotational Flows in Aerodynamics". *Boundary Integral Methods Theory and Applications* (L.Morino, R. Piva eds.) Proc. IABEM90, Roma, Ottobre 1990; Springer Verlag 85-94, (1991).

Preprints

1. M.R.Lancia (in coll. with S. Creo, G. Mola , S. Romanelli), Inverse problems in irregular domains: approximation via Mosco Convergence, to appear on Contemporary Mathematics 2024.
2. M.R.Lancia (in coll. with S. Creo and M. Hinz, " Nonlocal Boundary energy forms for quasidisks: codimension gap and approximation", submitted (2023).
3. M.R.Lancia (in coll. with A. Velez-Santiago)"A priori estimates for general elliptic and parabolic boundary value problems over irregular domains " Submitted (2023).
4. M.R.Lancia (in coll. with S. Creo), " Non-autonomous semilinear fractional evolution equations: well-posedness and ultracontractivity results, submitted (2025).
5. M.R.Lancia (in coll. with S. Creo, G. Mola , S. Romanelli), "Identification problems for anisotropic time-fractional subdiffusion equations, submitted (2025).

6. M.R.Lancia (in coll. with S. Creo, M. Di Domenico, "Maxwell Cattaneo equation for heat transport in fractal nanomaterials", submitted (2025).

Educational Publications

- 1 M.R.Lancia-S.Marconi, "Esercizi di Analisi matematica", 2015; edizione ampliata 2019 Ed. La Dotta.
- 2 M.R.Lancia-S.Marconi, " Temi di Analisi matematica", 2013 Ed. La Dotta.
- 3 M.R.Lancia-S.Marconi, "Esercizi di introduzione al calcolo differenziale e integrale", 2019 Ed.La Dotta.
- 4 M.R.Lancia " Conduzione del calore attraverso strati frattali sottili altamente conduttivi", 37-40, in NUOVA SECONDARIA - ISSN:1828-4582 vol. 9 (anno XXV), 2008.

PhD Thesis and internal reports

1. Lancia M.R., "Una Formulazione integrale in velocità per campi aerodinamici", *tesi di Dottorato*, Roma 1993.
2. M.R.Lancia (in coll. con M.A.Vivaldi), "Teoremi di traccia per domini irregolari", Quaderno n. 4 del Dipartimento di Metodi e Modelli Matematici per le Scienze Applicate, 1999

Summary of scientific Achievements:

- Papers [international]: 54 (indexed in WOS or SCOPUS)- 67 (including also non indexed papers)
- Papers [national]: 1
- Books [scientific]:3 (indexed in WOS or SCOPUS)
- Books [teaching]: 3