

## Maria Rosaria Lancia's Articles indexed in WOS or SCOPUS

1. (in coll. with M.Cefalo, S.Creo and J. Rodriguez Cuadrado)"Fractal mixtures for optimal heat draining, to appear on Chaos Solitons and Fractals, (2023)
2. (in coll. with R.Capitanelli and S.Creo)" Asymptotics for time fractional Venttsel' problems in fractal domains", *Fractal. Fract.* 2023, 7, 479, (2023)
3. M.R.Lancia (in coll. con S.Creo), " The p-curl system in extension domains, DCDS-s, online, DOI10.3934/dcdss.2023113, June (2023)
4. M. R. Lancia (in coll. with P.Vernole), " Nonautonomous semilinear Wentzell problems in fractal domains", *J. Evol. Equ.* 22, 88 (2022).
5. 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*, 15,(12), (2022), 3621 – 3644.
6. M.R.Lancia (in coll. con S.Creo), "Fractional (s,p)-Robin-Venttsel' problems on extension domains", *NoDEA Nonlinear Differential Equations Appl.*, 28 (3), (2021), paper no. 31, 33 pp.
7. 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).
8. M. R. Lancia (in coll. with S.Creo, and P.Vernole)," M-Convergence of p-fractional energies in irregular domains", *Journal of Convex Analysis*, 28, (2), (2021), 509 – 534.
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), (2020), 1416-1430.
10. M.R.Lancia (in coll. con S.Creo, and P.Vernole),"Convergence of fractional diffusion processes on extension domains" , *J. Evol. Equ.* 20 (2020), 109 – 139.
11. M.R.Lancia (in coll. con S.Creo)," Friedrichs inequality in irregular domains", *J. Math. Anal. Appl.*, 2020, 484, 109-139 DOI: 10.1016/j.jmaa.2019.123665
12. M.R.Lancia (in coll. con 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, 2020, 477-502. [https://doi.org/10.1142/9789811215537\\_015](https://doi.org/10.1142/9789811215537_015)
13. M.R.Lancia (in coll. con 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
14. M.R.Lancia (in coll. con 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.
15. M.R.Lancia (in coll. con P.Vernole) " The Stokes problem in fractal domains: asymptotic behaviour of the solutions", *DCDS-S*, 13,1553-1565, 2020, 10.3934/dcdss.2020088.
16. M.R.Lancia (in coll. con 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), (2019), 57-64.

17. M.R.Lancia (in coll. con M.Hinz, A.Teplyaev and P.Vernole) "Fractal snowflake domain diffusion with boundary and interior drifts". *JMAA*, **457**, 672-693, (2018).
18. M.R.Lancia (in coll. con S.Creo, A. Velez-Santiago and P.Vernole), "Approximation of a nonlinear fractal energy functional on varying Hilbert spaces". *Commun. Pure Appl. Anal.*, **17** (2018), no. 2, 647–669.
19. M.R.Lancia (in coll. con 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).
20. M.R.Lancia (in coll. con 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)
21. M.R.Lancia (in coll. con V. regis Durante, P.Vernole), "Density results for energy spaces on some fractafolds." *Z. Anal. Anwend.* **34**, 357–372, (2015).
22. M.R.Lancia (in coll con M.Cefalo) "An optimal mesh generation algorithm for domains with Koch type boundaries." *Math. Comput. Simulation* **106**, 133–162, (2014).
23. M.R.Lancia (in coll. con P.Vernole), "Venttsel' problems in fractal domains" *J. Evol. Equ.* **14**, 681–712, (2014).
24. M.R.Lancia (in coll con R.Capitanelli e M.A.Vivaldi, ), "Insulating layers of fractal type" *Differential and Integral equations.* **26** (2013), 1055-1076.
25. M.R.Lancia (in coll con M.Cefalo e H.Liang, ), "Heat flow problems across fractal mixtures: regularity results and numerical approximation" *Differential and Integral equations.* **26**, (2013), 1027-1054
26. M.R.Lancia (in coll. con P.Vernole) "Semilinear fractal problems: approximation and regularity results" *Nonlinear Anal.*, **80** (2013), 216–232.
27. M.R.Lancia (in coll. con P.Vernole) "Semilinear evolution transmission problems across fractal layers" *NonLinear Analysis T.M.A.*, **75**, 4222-4240, (2012)
28. M.R. Lancia ( in coll. con G. Dell'Acqua e Massimo Cefalo) "Numerical approximation of transmission problems across Koch-type highly conductive layers. *Applied Math. and Comp.*, **218**, 9, 5453-5473, (2012).
29. M.R.Lancia (in coll. con P.Vernole) "Irregular heat flow problems." *SIAM Journal on Mathematical Analysis*, **42**, no.4, 1539–1567, (2010).
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31. M.R.Lancia (in coll. con J.Masamune), "The Liouville property of unbounded fractal layers" *Complex Variables and Elliptic Equations*, **53**, 4: 297-306, 2008.
32. M.R.Lancia (in coll. con U.Freiberg), "Energy forms on conformal  $C^1$  diffeomorphic images of the Sierpinski Gasket", *Math. Nachr.* **3**: 337-349, 2008
33. M.R.Lancia, "On some second order transmission problems", *Arabian Journal for science and engineering* **29-2C**, 85-100, 2004. Special issue: Wavelet and fractal methods in science and engineering. .
34. M.R.Lancia (in coll. con U.Freiberg), "Energy forms on a closed fractal curve", *Zeitschrift für Analysis und ihre Anwendungen*, **23**, 115-137, 2004.

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38. M.R.Lancia (in coll. con M.Chicco), "Generalized maximum principle and evaluation of the first eigenvalue for Heisenberg-type operators", *.Boll. Unione Mat. Ital. Sez. B Artic. Ric. Mat.* **8** 4 (2001), no. 2, 441-456.
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40. M.R.Lancia (in coll. con Podio-Guidugli P., Vergara Caffarelli G.), "Gleanings of Radial Cavitation", *Journal of elasticity* , **44** 183-192, 1996.
41. M.R.Lancia (in coll. Bassanini P., Casciola C.M., Piva R.), "Uniqueness of the bounded flow solution in aerodynamics", *Comp.Mech.* **22**, 12-18, 1998.
42. M.R.Lancia (in coll. Bassanini P., Casciola C.M., Piva R.), "A theoretical model for multiply connected wings", *European Journal of Applied Mathematics* , **9**, 6, 607-634, 1998.
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44. M.R.Lancia (in coll. Bassanini P., Casciola C.M., Piva R.), "On the trailing edge singularity and Kutta condition for 3D airfoils", *Eur. Jour. of Mech. B/fluids* **15** , 6, 809-830, 1996.
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#### Proceedings peer reviewed, indexed in WOS or SCOPUS

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, Maggio 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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#### Articles peer reviewed on non indexed journals or books

1. M.R.Lancia (in coll. con P.Vernole) "Semilinear Venttsel' Problems in Fractal Domains", *Applied Mathematics*, Vol.5 No.12, , DOI: 10.4236/am.2014.512175 , 1820-1833, (2014)
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* Volume 2014 (2014), Article ID 461046, 13 pages  
<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 corso di stampa su special volume on "Mathematical modeling of bodies with complicated bulk and boundary behavior" , *Quaderni di Matematica*, Seconda Università degli Studi di Napoli, 2008.
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#### Proceedings peer reviewed on non indexed books

1. M.R.Lancia (in coll. Bassanini P., Casciola C.M., Piva R.), "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 giugno 1997, Università di Siviglia;
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### Preprints

1. M.R.Lancia (in coll. with S.Creo) "Dynamical boundary conditions for time-dependent fractional operators on extension domains". Submitted (2022).
2. M.R.Lancia (in coll. with S.Creo) "The p-curl system in extension domains". Submitted (2022).

### 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.