List of Publications

Francesca Da Lio [*]

1. (with M. Bardi), *On the Bellman equation for some unbounded control problems*, Nodea, Nonlinear Differential Equations Appl. 4 (1997), 49–510.

2. (with M. Bardi), *Propagation of Maxima and Strong Maximum Principle for Degenerate Elliptic Equations*, Proceeding of the Eighth Tokyo Conference on Nonlinear PDE (1998), 17–28.

3. (with M. Bardi), *Propagation of maxima and strong maximum principle for viscosity solutions of degenerate elliptic equations. Equadiff99, International conference on differential equations*, Berlin 1999. Ed. B.Fiedler, K.Groger and J.Sprekels, Equadiff99, (1999), 2:589–591.

4. (with M. Bardi), *On the strong maximum principle for fully nonlinear degenerate elliptic equations*, Arch. Math., 73 (1999), 276–285.

5. *On the Bellman equation for infinite horizon problems with unbounded cost functional*, Appl. Math. Optim., 41 (2000), 171–197.

6. (with M. Bardi), *Propagation of maxima and strong maximum principle for viscosity solutions of degenerate elliptic equations. I: Convex operators*, Nonlinear Anal., 44, no.8, Ser A:Theory Methods (2001), 991–1006.

7. (with W.M. McEneaney), *Finite Time Horizon Risk Sensitive Control and the Robust Limit under a Quadratic Growth Assumption*, Siam J. Control. Optim., 40 n.5 (2002), 1628–1661.

8. *Strong Comparison Results for Quasilinear Equations in Annular Domains and Applications*, Comm. in PDE, 27, n.1 (2002), 283-323.

9. (with M. Bardi), *Propagation of maxima and strong maximum principle for viscosity solutions of degenerate elliptic equations. II: Concave operators*, Indiana Univ. Math. J. 52 (2003), 607–628.

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10. (with G. Barles), *A Geometrical Approach to Front Propagation Problems in Bounded Domains with Neumann-type Boundary Conditions*, Interfaces and Free Boundaries, 5 (2003), 1–36.

11. (with G. Barles), *Remarks on the Dirichlet and State-Constraint Problems for Quasilinear Parabolic Equations*, Advances Differential Equations, Vol. 8, n.8 (2003), 897–922.

12. *Remarks on the Strong Maximum Principle for Viscosity Solutions to Fully Nonlinear Parabolic Equations*, Communications on Pure and Applied Analysis, Vol 3, n.3 (2004), 395–415.

13. (with G. Barles), *On the Generalized Dirichlet Problem for Viscous Hamilton-Jacobi Equations*, J. Math. Pures Appl. 83 (2004), 53-75.

14. (with I.Kim, D. Slepcev), *Nonlocal Front Propagation Problems in Bounded Domains with Neumann-type Boundary Conditions and Applications*, Asymptotic Analysis 37 (3,4) (2004), 257–292.

15. (with G. Barles), *On the Boundary Ergodic Problem for Fully Nonlinear Equations in Bounded Domains with General Nonlinear Neumann Boundary Conditions*, Ann Inst. Henri Poincare, Analyse non linéaire, Volume 22 (5) (2005), 521–541.

16. (with A. Montanari), *Existence and Uniqueness of Lipschitz Continuous Graphs with Prescribed Levi Curvature*, Ann Inst. Henri Poincare, Analyse non linéaire, Volume 23 (1) (2006), 1–28.

17. (with L. Rodino), *A Pizzetti-Type Formula for the Heat Operator*, Arch. Math. 87 (2006), 261–171.

18. (with O. Ley), *Uniqueness Results for Second Order Bellman-Isaacs Equations under Quadratic Growth Assumptions and Applications*, Siam J. Control. Optim., 45 (2006), n.1, 74–106.

19. (with G. Barles), *Local $C^{0,\alpha}$ Estimates for Viscosity Solutions to Neumann-type Boundary Value Problems*, J. Differential Equations, 225 (2006), 202–241

20. (with G. Barles), *A weak comparison theorem and an example*, appendix in the paper : R.K. Kohn, S. Serfaty, *A deterministic-control based approach to motion by curvature*, Comm. Pure Appl Math. 59, n.3 (2006), 344–407.

21. (with P. Cardaliaguet, N. Forcadel, R. Monneau) , *Dislocation dynamics: a non-local moving boundary*, proceedings du congres FBP 2005, Coimbra, Portugal, International Series of Numerical Mathematics, Vol. 154, Birkhäuser Verlag Basel/Switzerland, (2006), 125–135.

22. (with B. Sirakov), *Symmetry properties of viscosity solutions to nonlinear uniformly elliptic equations*, J. Eur. Math. Soc., 9, (2007), 317–330.

23. (with A. Cutrì), *Comparison and existence results for non-coercive first order Hamilton-Jacobi equations*, ESAIM Control Optim. Calc. Var., 13 (2007), no. 3, 484–502.

24. (with N. Forcadel, R. Monneau), *Convergence of a nonlocal eikonal equation to anisotropic mean curvature motion. Application to dislocation dynamics*, J. Eur. Math. Soc., Volume 10, Issue 4 (2008), 1061–1104.

25. *Asymptotic Behavior of Solutions to Parabolic Equations with Neumann-Type Boundary Conditions*, J. Math. Anal.Appl. 339 (2008), 384–398.

26. (with G. Barles, P.L. Lions, P. Souganidis), *Ergodic problems and periodic homogenization for fully nonlinear equations in half-space type domains with Neumann boundary conditions*, Indiana Univ. Math. J., 57, n.5 (2008), 2355 – 2376.

27. *Partial Regularity for Stationary Solutions to Liouville-Type Equation in dimension 3*, Comm. in PDE, Volume 33, Issue 10 (2008), 1890 – 1910.

28. (with O. Ley), *Convex Hamilton-Jacobi Equations Under Superlinear Growth Conditions on Data*, Applied Mathematics & Optimization, Volume 63, Issue 3 (2011), 309–339.

29. (with T. Rivière), *3-Commutators Estimates and the Regularity of $1/2$-Harmonic Maps into Spheres*, APDE 4-1 (2011), 149–190.

30. (with T. Rivière), *Sub-criticality of non-local Schrödinger systems with antisymmetric potentials and applications to half-harmonic maps*, Advances in Mathematics 227, (2011), 1300–1348.

31. *Fractional Harmonic Maps into Manifolds in odd dimension $n > 1$*, Calculus of Variations and PDEs, Volume 48, Issue 3-4, (2013), 421–445.

32. (with A. Schikorra), *n/p-harmonic maps: regularity for the sphere case*, Adv. Calc. Var. 7 (2014), no. 1, 1–26.

33. *Compactness and Bubbles Analysis for 1/2-harmonic Maps*, Annales de l'Institut Henri Poincaré, Analyse non linéaire 32 (2015), 201–224.

34. (with L. Martinazzi, T. Rivière), *Blow-up analysis of a nonlocal Liouville-type equation*, APDE Vol.8, no 7 (2015), 1757–1805.

35. (with T. Rivière), *Horizontal α-Harmonic Maps*, arXiv:1604.05461, not submitted yet.

36. (with L. Martinazzi), *The nonlocal Liouville-type equation in $\mathbb{R}^n$ and conformal immersions of the disk with boundary singularities*, Calc. Var. Partial Differential Equations 56 (2017), no. 5, Art. 152, 31 pp.

37. (with P. Laurain, T. Rivière), *Pohozaev-type Formulae and Quantization of Horizontal α-Harmonic Maps* , arXiv:1607.05504, not submitted yet.

38. (with F. Palmurella), *Remarks on Neumann boundary problems involving Jacobians*, Comm. Partial Differential Equations 42 (2017), no. 10, 1497–1509.

39. (with A. Schikorra), *On regularity theory for n/p-harmonic maps into manifolds*, Nonlinear Anal. 165 (2017), 182–197.

40. *Fractional Harmonic Maps, Recent Developments in Nonlocal Theory.* Ed. by Palatucci, Giampiero / Kuusi, Tuomo, De Gruyter, 2018.

41. *Remarks on Pohozaev-Type Identities for the Half Laplacian in 1D*, Bruno Pini Mathematical Analysis Seminar 2018, 115–136, Bruno Pini, Math. Anal. Semin., 9, Univ. Bologna, Alma Mater Stud., Bologna.

42. (with F. Palmurella, T. Rivière), *A resolution of the Poisson Problem for elastic plates*, Archive for Rational Mechanics and Analysis, volume 236, (2020), 1593–1676 .

43. (with A. Pigati), *Free Boundary Surfaces: A nonlocal Approach*, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) Vol. XX (2020), 1–53.

44. (with T. Rivière), *3-Commutators Revisited*, Comm. Partial Differential Equations 45 (2020), no. 8, 931–969.

45. (with T. Rivière), *Critical Chirality in Elliptic Systems*, Annales de l'Institut Henri Poincaré / Analyse non linéaire, Volume 38,(2021), no 5, 1373–1405.

46. (with T. Rivière, J. Wettstein), *Bergman-Bourgain-Brezis type inequality*, J. Funct. Anal. 281 (2021), no. 9, 33 pp.

47. (with K. Mazowiecka, A. Schikorra), *A fractional version of Rivière 's GL(n)-gauge*, Ann. Mat. Pura Appl. (4) 201 (2022), no. 4, 1817–1853.

48. (with T. Rivière, J. Wettstein), *Integrability by compensation for Dirac Equation*, Transactions of the American Mathematical Society, Vol. 375, No. 6, (2022), 4477–4511.

49. (with A. Hyder), *Blow-up Analysis of Stationary Solutions to a Liouville-Type Equation in 3-D*, arXiv:2303.04464, submitted.

50. (with M. Gianocca, T. Rivière), *Morse Index Stability for Critical Points to Conformally invariant Lagrangians*, arXiv:2212.03124, submitted.

51. (with M. Gianocca), *Morse Index Stability for Ginzburg-Landau type Approximation*, arXiv:2406.07317v2, submitted.

Theses

1. **PhD Thesis :** *Propagation of maxima and uniqueness results for viscosity solutions of fully nonlinear 1st and 2nd order equations*, University of Padova, **1998**

2. **Master Thesis :** *Equazioni di Bellman per problemi di controllo ottimo illimitato*, University of Padova, **1994**