

PUBLICATION SUMMARY OF ANDREA MONDINO

PUBLICATIONS

1. A. Mondino, *Some results about the existence of critical points for the Willmore functional*, Math. Zeit., Vol. 266, Num. 3, (2010), pp. 583–622
2. A. Mondino, *The conformal Willmore Functional: a perturbative approach*, Journal of Geometric Analysis, Vol. 23, (2013), no. 2, pp. 764–811.
3. A. Mondino, *The Willmore and other L^p curvature functionals in Riemannian manifolds*, Ph. D. Thesis (2011), SISSA digital library.
4. N. Gigli, A. Mondino, *A PDE approach to non linear potential theory*, Journal de Mathématiques Pures et Appliquées, Vol. 100, (2013), no. 4, pp. 505–534.
5. A. Mondino, *Existence of Integral m -Varifolds minimizing $\int |A|^p$ and $\int |H|^p$ in Riemannian Manifolds*, Calculus of Variations and Partial Differential Equations, Vol. 49, (2014), no. 1–2, pp. 431–470.
6. E. Kuwert, A. Mondino, J. Schygulla, *Existence of immersed spheres minimizing curvature functionals in compact 3-manifolds*, Math. Annalen, Vol. 359, (2014), no. 1, pp. 379–425.
7. A. Mondino, T. Rivière, *Immersed Spheres of Finite Total Curvature into Manifolds*, Advances in Calculus of Variations, Vol. 7, (2014), no. 4, pp. 493–538.
8. A. Mondino, J. Schygulla *Existence of immersed spheres minimizing curvature functionals in non-compact 3-manifolds*, Annales de l’Institut Henri Poincaré / Analyse non linéaire, Vol. 31, (2014), pp. 707–724.
9. A. Mondino, T. Rivière, *Willmore Spheres in Compact Riemannian Manifolds*, Advances in Mathematics, Vol. 232, (2013), no.1, pp. 608–676.
10. A. Carlotto, A. Mondino, *Existence of generalized totally umbilic 2-spheres in perturbed 3-spheres*, Int. Math. Res. Not., Vol. 2014, (2014), no. 21, pp. 6020–6052.
11. N. Garofalo, A. Mondino, *Li-Yau and Harnack type inequalities in $RCD^*(K, N)$ metric measure spaces*, Nonlinear Analysis: Theory, Methods & Applications Vol. 95, (2014), pp. 721 – 734.
12. L. Keller, A. Mondino, T. Rivière, *Embedded surfaces of arbitrary genus minimizing the Willmore energy under isoperimetric constraint*, Arch. Rational Mech. Anal., Vol. 212, (2014), pp. 645–682.
13. A. Mondino, H. T. Nguyen, *A Gap Theorem for Willmore Tori and an application to the Willmore Flow*, Nonlinear Analysis: Theory, Methods & Applications, Vol. 102, (2014), pp. 220–225.
14. A. Mondino, A. Naber, *Structure Theory of Metric-Measure Spaces with Lower Ricci Curvature Bounds*, preprint arXiv:1405.2222, pp. 1–35, (2014), to appear in Journal of European Math. Soc..
15. P. Laurain, A. Mondino, *Concentration of small Willmore spheres in Riemannian 3-manifolds*, Analysis & PDE, Vol. 7, (2014), no. 8, pp. 1901–1921.
16. L. Ambrosio, N. Gigli, A. Mondino, T. Rajala, *Riemannian Ricci curvature lower bounds in metric measure spaces with σ -finite measure*, Trans. Amer. Math. Soc. 367 (2015), no. 7, pp. 4661–4701.
17. N. Gigli, A. Mondino, T. Rajala, *Euclidean spaces as weak tangents of infinitesimally Hilbertian metric spaces with Ricci curvature bounded below*, Journal für die Reine und Angew. Math. (Crelle’s journal), Vol. 705, (2015), pp. 233–244.
18. A. Mondino, *A new notion of angle between three points in a metric space*, Journal für die Reine und Angew. Math. (Crelle’s journal), Vol. 706, (2015), pp. 103–121.
19. N. Gigli, A. Mondino, G. Savaré, *Convergence of pointed non-compact metric measure spaces and stability of Ricci curvature bounds and heat flows*, Proc. London Math. Soc., Vol. 111, Num. 5, (2015), pp. 1071–1129.
20. A. Mondino, H. T. Nguyen, *Global conformal invariants for submanifolds*, preprint arXiv:1501.07527, pp. 1–28. (2015), to appear in the Annales de l’Institut Fourier.

21. A. Mondino, S. Nardulli, *Existence of Isoperimetric regions in non-compact Riemannian manifolds under Ricci curvature conditions*, Communications in Analysis and Geometry, Vol. 24, (2016), no. 1, pp. 115–136.
22. A. Mondino, T. Rivière, *A frame energy for immersed tori and applications to regular homotopy classes*, Journal of Differential Geometry, Vol. 104, (2016), no.1, pp. 143–186.
23. L. Ambrosio, A. Mondino, G. Savaré *On the Bakry-Émery condition, the gradient estimates and the Local-to-Global property of $RCD^*(K, N)$ metric measure spaces*, Journal of Geometric Analysis, Vol. 26, (2016), pp. 24–56.
24. A. Mondino, G. Wei, *On the universal cover and the fundamental group of an $RCD^*(K, N)$ -space*, preprint arXiv:1605.02854, pp.1–26, (2016), to appear in Crelle, DOI: 10.1515/crelle-2016-0068
25. M. Kell, A. Mondino, *On the volume measure of non-smooth spaces with Ricci curvature bounded below*, preprint arXiv:1607.02036, pp.1–17, (2016), to appear in Annali SNS-Classse di Scienze, DOI Number: 10.2422/2036 – 2145.201608.007.
26. F. Cavalletti, A. Mondino, *Measure rigidity of Ricci curvature lower bounds*, Advances in Mathematics, Vol. 286, (2016), pp. 430–480.
27. L. Ambrosio, A. Mondino, *Gaussian-type Isoperimetric Inequalities in $RCD(K, \infty)$ probability spaces for positive K* , Rend. Lincei Mat. Appl., Vol. 27, (2016), pp. 497–514 Special volume dedicated to the memory of E. De Giorgi.
28. F. Cavalletti, F. Maggi, A. Mondino, *Rigidity for critical points in the Levy-Gromov inequality*, preprint arXiv:1612.04119, pp.1–5, (2016), to appear in Math. Zeit.
29. N. Ikoma, A. Malchiodi, A. Mondino, *Embedded area-constrained Willmore tori of small area in Riemannian 3-manifolds I: minimization*, Proc. Lond. Math. Soc., Vol. 115, (2017), no. 3, pp. 502–544.
30. N. Ikoma, A. Malchiodi, A. Mondino, *Embedded area-constrained Willmore tori of small area in Riemannian 3-manifolds II: Morse Theory*, Amer. J. Math., Vol. 139, (2017), no. 5, pp. 1315–1378.
31. F. Cavalletti, A. Mondino, *Sharp and rigid isoperimetric inequalities in metric-measure spaces with lower Ricci curvature bounds*, Inventiones Math., Vol. 208, (2017), no. 3, pp. 803–849.
32. F. Cavalletti, A. Mondino, *Sharp geometric and functional inequalities in metric measure spaces with lower Ricci curvature bounds*, Geometry & Topology, Vol. 21, (2017), no. 1, pp. 603–645.
33. A. Carlotto, A. Mondino, *A non-existence result for minimal catenoids in asymptotically flat spaces*, Journal of London Math. Society, Vol. 95, (2017), no. 2, pp. 373–392.
34. F. Cavalletti, A. Mondino, *Optimal maps in essentially non-branching spaces*, Communications in Contemporary Math. Vol. 19, (2017), no. 6, 27 pp.
35. A. Mondino, E. Spadaro, *On a isoperimetric-isodiametric inequality*, Analysis and PDE, Vol. 10, (2017), no. 1, pp. 95–126.
36. L. Ambrosio, A. Mondino, G. Savaré, *Nonlinear diffusion equations and curvature conditions in metric measure spaces*, preprint arXiv:1509.07273, pp. 1–115, (2015), to appear in Memoirs Amer. Math. Soc.
37. B. Han, A. Mondino, *Angles between curves in metric measure spaces*, Anal. Geom. Metr. Spaces, Vol. 5, (2017), pp. 47–68.
38. C. Ketterer, A. Mondino, *Sectional and intermediate Ricci curvature lower bounds via Optimal Transport*, Advances in Math., Vol. 329, (2018), pp. 781–818.
39. F. Cavalletti, A. Mondino, *Almost euclidean Isoperimetric Inequalities in spaces satisfying local Ricci curvature lower bounds*, International Mathematics Research Notices (IMRN), <https://doi.org/10.1093/imrn/rny070>. (2018), pp.1–30.
40. F. Cavalletti, A. Mondino, *Isoperimetric inequalities for finite perimeter sets under lower Ricci curvature bounds*, Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl., Vol. 29, (2018), no. 3, 413–430.
41. F. Galaz-Garcia, M. Kell, A. Mondino, G. Sosa, *On quotients of spaces with Ricci curvature bounded below*, preprint arXiv:1704.05428, pp.1–51, (2017), to appear in Journal of Functional Analysis.

42. F. Cavalletti, F. Maggi, A. Mondino, *Quantitative isoperimetry á la Levy-Gromov*, preprint arXiv:1707.04326, pp. 1–30, (2017), to appear in Communications in Pure and Applied Mathematics.

PREPUBLICATIONS

43. A. Lerario, A. Mondino, *Homotopy properties of horizontal loop spaces and applications to closed sub-riemannian geodesics*, preprint arXiv:1509.07000, pp. 1–24, (2015).
44. F. Cavalletti, A. Mondino, *New formulas for the Laplacian of distance functions and applications*, preprint arXiv:1803.09687, pp. 1–41, (2018).
45. N. Ikoma, A. Malchiodi, A. Mondino, *Foliation by area-constrained Willmore spheres near a non-degenerate critical point of the scalar curvature*, preprint arXiv:1806.00390, pp.1–23, (2018).
46. A. Mondino, D. Semola, *Polya-Szego inequality and Dirichlet p -spectral gap for non-smooth spaces with Ricci curvature bounded below*, preprint arXiv, pp:1–32, (2018).

PROCEEDINGS

47. A. Mondino, *The Willmore Functional: a perturbative approach*, Online Proceedings of the "International Conference on the Isoperimetric Problem of Queen Dido and its Mathematical Ramifications", (2010).
48. A. Mondino, *The Willmore and other L^p -curvature functionals in Riemannian manifolds*, MFO Oberwolach Reports, Report Num. 36/2012, DOI:10.4171/OWR/2012/36, Calculus of Variations, 23-26, (2012).
49. A. Mondino, *Some new relations between $CD^*(K, N)$, the dimensional Bakry-Emery condition and the EVI property of gradient flows*, MFO Oberwolach Reports, Report Num. 23/2013, DOI: 10.4171/OWR/2013/23, Heat Kernels, Stochastic Processes and Functional Inequalities, (2013) .
50. A. Mondino, *A frame energy for tori immersed in R^m : sharp Willmore-conjecture type lower bound, regularity of critical points and applications*, MFO Oberwolach Reports (2013) .
51. A. Mondino, *PDEs in metric measure spaces and geometric applications*, MFO Oberwolach Reports (2013) .
52. A. Mondino, *Sharp and rigid isoperimetric inequalities in metric-measure spaces with lower Ricci curvature bounds*, MFO Oberwolach Reports (2015).
53. R. Kusner, A. Mondino, F. Schulze, *Willmore Bending Energy on the Space of Surfaces*, MSRI Emissary, spring (2016).
54. A. Mondino, *On a isoperimetric-isodiametric inequality*, MFO Oberwolfach Reports (2016) .
55. A. Mondino, *Functional inequalities via a 1-dimensional localization method*, MFO Oberwolfach Reports (2016), Heat Kernels, Stochastic Processes and Functional Inequalities.
56. N. Ikoma, A. Malchiodi, A. Mondino, *Area-constrained Willmore surfaces of small area in Riemannian three-manifolds: an approach via Lyapunov-Schmidt reduction*, Regularity and singularity for partial differential equations with conservation laws, pp. 31–50, RIMS Kokyuroku Bessatsu, B63, Res. Inst. Math. Sci. (RIMS), Kyoto, 2017.