Lake Arrowhead Optimal Transport School 2013
Literature List

Optimal transport: general theory (the Monge-Kantorovich problem, Brenier's theory. . .)

References.

[1] K Ball. "An Elementary Introduction to Monotone Transportation". In: *Geometric Aspects of Functional Analysis*. Springer, 2004, pp. 41–52.

[2] Yann Brenier. "Polar factorization and monotone rearrangement of vector-valued functions". In: *Communications on pure and applied mathematics* 44.4 (1991), pp. 375–417.

[3] Robert J McCann and Nestor Guillen. "Geometry, Regularity and Applications". In: *Analysis and Geometry of Metric Measure Spaces: Lecture Notes of the 50th Séminaire de Mathématiques Supérieures (SMS), Montréal, 2011* 56 (2013), p. 145.

Analysis of PDE related to mass transport (regularity and related topics).

References.

[4] Luis A Caffarelli. "A priori estimates and the geometry of the Monge-Ampère equation". In: *Nonlinear Partial Differential Equations in Differential Geometry, IAS/Park City Math. Ser* 2 (1992), pp. 7–63.

[5] Lawrence C Evans. "Partial differential equations and Monge-Kantorovich mass transfer". In: *Current developments in mathematics* (1997), pp. 65–126.

[6] Lawrence C Evans and Wilfrid Gangbo. *Differential equations methods for the Monge-Kantorovich mass transfer problem*. 653. American Mathematical Soc., 1999.

[7] Alexander V Kolesnikov. "On Sobolev regularity of mass transport and transportation inequalities". In: *arXiv preprint arXiv:1007.1103* (2010).

[8] Robert John McCann. "A convexity theory for interacting gases and equilibrium crystals". PhD thesis. Princeton University, 1994.

Inequalities: isoperimetry, entropy and others.

References.

[7] Alexander V Kolesnikov. "On Sobolev regularity of mass transport and transportation inequalities". In: *arXiv preprint arXiv:1007.1103* (2010).

[9] Alessio Figalli, Francesco Maggi, and Aldo Pratelli. "A mass transportation approach to quantitative isoperimetric inequalities". In: *Inventiones mathematicae* 182.1 (2010), pp. 167–211.

[10] Emanuel Milman and Sasha Sodin. "An isoperimetric inequality for uniformly log-concave measures and uniformly convex bodies". In: *Journal of Functional Analysis* 254.5 (2008), pp. 1235–1268.

[11] Shiri Artstein, Keith Ball, Franck Barthe, and Assaf Naor. "Solution of Shannon's problem on the monotonicity of entropy". In: *Journal of the American Mathematical Society* 17.4 (2004), pp. 975–982.

[12] Dimitri Shlyakhtenko and Hanne Schultz. "Shannon's monotonicity problem for free and classical entropy". In: *Proceedings of the National Academy of Sciences* 104.39 (2007), pp. 15254–15258.

Dynamics and gradient flows.

References.

[13] Dominique Bakry and Michel Ledoux. "Lévy-Gromov's isoperimetric inequality for an infinite dimensional diffusion generator". In: *Inventiones mathematicae* 123.2 (1996), pp. 259–281.

[14] Jean-David Benamou and Yann Brenier. "A computational fluid mechanics solution to the Monge-Kantorovich mass transfer problem". In: *Numerische Mathematik* 84.3 (2000), pp. 375–393.

[15] Felix Otto and Cédric Villani. "Generalization of an inequality by Talagrand and links with the logarithmic Sobolev inequality". In: *Journal of Functional Analysis* 173.2 (2000), pp. 361–400.