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# Duality in Multi-Marginal Martingale Optimal Transport

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## Résumé

Abstract: Work done under the direction of Nizar Touzi.

Martingale optimal transport is an extension of classical optimal transport that includes a martingale constraint on the considered coupling. New geometric constraints arise from this martingaleness. The dual problem may not provide duality if it is taken pointwise as it does in classical optimal transport. There arises a decomposition of the space in "irreducible components". We study the existence and the properties of these irreducible components and show how they allow to have componentwise duality and existence of the dual optimizer. (Je peux envoyer une version française si besoin).

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