

# Old and recent results on Branched Transport Problems

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*Abstract:*

The Branched Transport Problem is a variation of the Monge-Kantorovich Transport Problem. In order to describe natural and artificial systems that show branched structures a new class of functionals has been introduced. In this class the transport cost of a mass  $m$  on a path of length  $l$  is given by  $m^\alpha l$ , where  $0 \leq \alpha < 1$  is a given parameter. Then, the branched structures arise from the sub-additivity of the power function. Existence of the minima and their regularity are interesting problems in this field. We will review some old and recent results about them.