On the mass transport problem with relativistic cost

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Abstract.

In this talk, we will describe the mass transport problem with a relativistic cost function; these are cost functions which are convex and bounded in a closed, convex subset of $\mathbb{R}^N$, and $+\infty$ outside of it; the prototype is the “relativistic heat cost”, which is

\[ c_{\text{heat}}(x, y) := \begin{cases} 
1 - \sqrt{1 - |y - x|^2} & \text{if } |y - x| \leq 1, \\
+\infty & \text{otherwise.}
\end{cases} \]

We will list and discuss the main properties and open questions regarding this specific kind of cost. Joint work with J. Bertrand and M. Puel.

References