Transportation cost spaces and invariant projections

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The talk is based on joint papers with S. J. Dilworth and M. Ostrovskii. We study transportation cost spaces associated to some unweighted graphs with the shortest path distance. Our main goal is to estimate the Banach-Mazur distance to an ℓ_1^n space of the same dimension. We use the method of invariant projections of Grunbaum, Rudin and Andrew to analyze projections that are invariant with respect to a certain group of isometries of the edge space. That allows us to find lower bounds for the Banach-Mazur distance. We use ad hoc arguments to get matching upper bounds in some particular cases. Recently, R. Medina and G. Tresch developed a general method for obtaining upper bounds.

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