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Beata Randrianantoanina* (randrib@miamioh.edu), Department of Mathematics, Miami University, Oxford, OH 45056, and **Mikhail I. Ostrovskii**. *On L_1 -embeddability of twisted unions of hypercubes and related results*. Preliminary report.

Let \mathcal{E} be a class of metric spaces, (X, d) be a metric space, and A, B be metric subspaces of X so that $X = A \cup B$ and $(A, d), (B, d)$ embed bilipschitzly into spaces $E_A, E_B \in \mathcal{E}$ with distortions D_A, D_B , respectively. Does this imply that there exists a constant D depending only on D_A, D_B , and the class \mathcal{E} , so that (X, d) embeds bilipschitzly into some space $E_X \in \mathcal{E}$ with distortion D ?

This question was answered affirmatively for the class \mathcal{E} of all ultrametric spaces by Mendel and Naor in 2013, and for the class \mathcal{E} of all Hilbert spaces by K. Makarychev and Y. Makarychev in 2016. K. Makarychev and Y. Makarychev in 2016 conjectured that the answer is negative when \mathcal{E} is a class of ℓ_p -spaces for any fixed $p \notin \{2, \infty\}$, in particular for $p = 1$. In this connection, Naor in 2015 and Naor and Rabani in 2017 asked whether the “twisted union of hypercubes” metric space, first introduced by Lindenstrauss in 1964, and also considered by Johnson and Lindenstrauss in 1984, embeds into ℓ_1 .

In this talk I will show how to embed several classes of twisted unions of cube metrics into ℓ_1 and discuss some related results (joint work with Mikhail I. Ostrovskii). (Received January 18, 2021)