

Every strongly rigid metric space (X, d) has the following properties. Any two disjoint subsets of X admit at most one best proximity pair. For every proximal subset A of X each point of X has exactly one best approximation in A . The symmetric group of X coincides with the group of all combinatorial self-similarities of (X, d) . The main goal is to characterize, up to isometry, those semimetric spaces that have these properties. This talk is based on the joint works with Viktoriia Bilet and Ruslan Shanin.