RAZVAN ANISCA, Lakehead University

On the number of mutually non-isomorphic infinite-dimensional subspaces of a Banach space

The positive solution to the homogeneous space problem yields that ℓ_2 is the only infinite-dimensional Banach space, up to isomorphism, which is isomorphic to all its infinite-dimensional subspaces. For a Banach space X which is not isomorphic to ℓ_2, we investigate the problem of finding the number of non-isomorphic infinite-dimensional subspaces of X. As a consequence of our construction we also obtain a structural result about Banach spaces containing an unconditional basic sequence.