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*Homogeneity and rigidity in Erdős spaces*

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**Abstract:** The classical Erdős spaces are obtained as the subspaces of real separable Hilbert space consisting of the points with all coordinates rational or all coordinates irrational, respectively. One can create variations by specifying in which set each coordinate is allowed to vary. We investigate the homogeneity of the resulting subspaces. Our two main results are: in case all coordinates are allowed to vary in the same set the subspace need not be homogeneous, and by specifying different sets for different coordinates it is possible to create a rigid subspace.

**Keywords:** Erdős space; homogeneity; rigidity; sphere

**AMS Subject Classification:** 54F99, 46A45, 54B05, 54D65, 54E50, 54F50

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