

The small Dowker space problem

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It is well-known that the product of two normal topological spaces need not be normal, but what about the normality of the product of a normal space \mathbb{X} with the unit interval $[0, 1]$? A counterexample space \mathbb{X} is called a "Dowker space". In 1972, Rudin proved that such a space exists, but it remains open whether there must exist a Dowker space of size \aleph_1 . In this talk, we shall report on a joint work with Rinot and Todorćević in which we present a weak sufficient condition for the existence of a small Dowker space.