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Menger Theorem for infinite graphs  

Abstract  

We prove that given two sets of vertices, $A$ and $B$, in a possibly infinite digraph, there exist a set $P$ of disjoint $A-B$ paths, and a set $S$ of vertices separating $A$ from $B$ consisting of a choice of precisely one vertex from each path in $P$. This settles an old conjecture of Erdős. The talk gives some history of the problem and introduces the main ideas of the proof.

This is joint work with Ron Aharoni.