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*Embedding Peano Spaces in Surfaces*

It is known that each surface  $S$  has a finite set  $F(S)$  of minimal finite graphs that do not embed in  $S$ . A Peano space is a topological space that is a continuous image of the unit interval. This is equivalent to being a locally connected, connected, compact metric space. We show that a Peano space  $P$  embeds in  $S$  if and only if  $P$  contains one of: a finite graph in  $F(S)$ ; a surface with Euler characteristic larger than that of  $S$ ; or a generalization of the thumbtack space.