An effective method for studying geometric spaces is to probe them using simpler spaces, e.g., circles or loops (continuous paths in the space that begin and end at the same point). The collection of all loops is called the “fundamental group” and it records information about the basic shape of a given space. This talk will introduce the fundamental group of some familiar topological spaces and use these computations to answer the following question: is it possible to hang a picture on a wall from a string using two nails in such a way that removing either of the two nails will make the string and picture fall down?

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