The Strong Isometric Dimension Problem

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Abstract

There are a number of ways to define the dimension of a graph G. In this talk I will try to describe the general problem and will then focus on the strong isometric dimension. Every finite, simple graph can be embedded isometrically into the strong product of a finite number of paths. The **strong isometric dimension** of G, denoted $\mathbf{idim}(G)$, is the fewest number of paths in such an embedding. After introducing and defining all relevant terms I will focus on examples and a conjecture concerning the strong isometric dimension of trees.

This talk concerns joint work with Drago Bokal, Janja Jerebic, and Iztok Peterin.