Cut-and-Project Graphs

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A graph Γ is *periodic* if it has a free abelian group of automorphisms of finite index in the graph. Such a graph may be embedded ("realized") in a Euclidean space $\mathbf{R}^d$ if d is the rank of that group of automorphisms, and so that its set of vertices is uniformly discrete. Given a vector space $\mathbf{E} \leq \mathbf{R}^d$ and a (convex, compact) "window" $W \subset \mathbf{E}^{\perp}$, one obtains a restriction of Γ to the "slice" $W \times \mathbf{E}$. We review some of the properties of these "cut-and-project" graphs.

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