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intrinsically knotted

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A graph Γ is called *intrinsically knotted* if every embedding of Γ in \mathbb{R}^3 contains a nontrivial knot.

Example: K_7 , the complete graph on 7 vertices, was proven to be intrinsically knotted by Conway and Gordon.

The property of being *not* intrinsically knotted is *inherited by minors*. That is, if a graph Γ is not intrinsically knotted and the graph Γ' can be obtained from Γ by deleting or contracting edges, then Γ' is also not intrinsically knotted.

According to the Robertson-Seymour Theorem (also known as Wagner's Conjecture), this means that the obstruction set for this property must be finite. Thus there are only a finite number of intrinsically knotted graphs which are minor minimal, that is, for which any graph obtained by edge deletion or contraction is not intrinsically knotted. As of the creation of this article (06/01/2008), this set is still not known.