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## Construction of a traversable wormhole from a suitable embedding function

*Tuesday 15 November 2022 16:30 (2 hours)* 

In this work, we construct a traversable wormhole by providing a suitable embedding function ensuring the fulfilling of the flaring–out condition. The solution contains free parameters that are reduced through the study of the acceptable conditions of a traversable wormhole. We compute both the quantifier of exotic matter and the quasi–normal modes through the  $13^{th}$  order WKB as a function of the remaining free parameters. We obtain that the wormhole geometry can be sustained by a finite amount of exotic matter and seems to be stable under scalar perturbations.

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Yes

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