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## **Distinguishing Jordan and Einstein frames in gravity through entanglement**

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In general relativity, the use of conformal transformation is ubiquitous and leads to two different frames of reference, known as the Jordan and the Einstein frames. Typically, the transformation from the Jordan frame to the Einstein frame involves introducing an additional scalar degree of freedom, often already present in the theory. We will show that at the quantum level, owing to this extra scalar degree of freedom these two frames exhibit subtle differences that the entanglement between two massive objects can probe.

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