



Contribution ID: 21

Type: **not specified**

## Testing tunnelling with gravity

*Thursday 25 July 2019 09:30 (30 minutes)*

This is the first of three talks exploring the feasibility building a quantum simulator for vacuum decay.

Vacuum decay is an important quantum phenomenon that could have occurred in the early universe, and has current importance due to the metastability of the Standard Model. I will review the toolkit we use in QFT and Gravity for computing the probability of vacuum decay, also showing how impurities can catalyse decay, and discuss the implications for the Higgs vacuum. I will argue that it is extremely timely to revisit our description of tunnelling in field theory, and important to explore the possibility of experimental tests.

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