

Extreme Universe

The 13th COLLOQUIUM

February 24th (Fri.) HYBRID

ZOOM + Panasonic Hall in YITP, Kyoto

TALK 16:00 - 17:00 (JST)

February 24th (Fri.) 7:00 - 8:00 am (GMT)

ONLINE COFFEE TIME

17:00 - 18:00 (JST)

Registration required (click [HERE](#))

Extreme Universe, JAPAN



Speaker

Prof. Takahiro Tanaka

Kyoto University

Title

Pathology in WKB wave function
for tunneling assisted by gravity

Abstract

There are several exotic tunneling phenomena that cannot be realised when the effects of gravity is turned off. Here, we point out that we run into difficulties in constructing the WKB wavefunction when trying to describe quantum fluctuations around semi-classical tunneling path in the configuration space. Pathologies in true vacuum decay/upward tunneling, false vacuum collapse catalysed by black holes and tunneling with black hole/wormhole creation will be discussed.

Collaboration

2023

