

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India

Seminar Notice

Org. by

School of Physical Sciences

Title:	Swampland and the Bunch-Davies vacuum
Speaker:	Suddhasattwa Brahma, Asia Pacific Centre for Theoretical Physics (APCTP), South Korea
Date:	August 21, 2019 (Wednesday)
Time:	15:30
Venue:	Physics Seminar Room (C-406), 3rd Floor, Centenary Building, IACS
Abstract:	Recently, it has been conjectured, based on a numerous results from String Theory, that any consistent theory of quantum gravity must obey certain constraints known as the "Swampland conjectures". These have several consequences for low-energy effective field theories and for their applications to cosmology; most strikingly, the fact that the de Sitter vacuum is ruled out. In this talk, we show several examples of consistent cosmological models which satisfy the swampland conjectures while also being phenomenologically viable. We also discuss some other obstructions to the Bunch-Davies vacuum, coming from the Hartle-Hawking wave function, and how they can possibly be avoided with additional quantum gravity corrections.

All are cordially invited to attend the seminar