

LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

## ARNOLD SOMMERFELD CENTER FOR THEORETICAL PHYSICS



## Sommerfeld Theory Colloquium

Prof. Gary Shiu

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Quantum Gravity and the Swampland

String theory seems to offer an enormous number of possibilities for low energy physics. The huge set of solutions is often known as the String Theory Landscape. In recent years, however, it has become clear that not all quantum field theories can be consistently coupled to gravity. Theories that cannot be ultraviolet completed in quantum gravity are said to be in the Swampland. In this talk, Ill discuss some conjectured properties of quantum gravity, evidences for them, and their applications to cosmology and particle physics.

Wednesday, 17 July 2019, 16:15h, Room A348, Theresienstr. 37/III