FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 17.01.2019, 16^{15} Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Patrick Vaudrevange

(Physik Department, TU München)

Origin of CP and Flavor from the String Landscape

String Theory in four dimensions is highly predictive due to the compactification of extra dimensions, because after specifying a set of abstract compactification parameters, the particle content, all symmetries and all interactions in the effective low-energy theory are uniquely fixed. This is in contrast to ordinary Quantum Field Theory, since the effective Lagrangian from String Theory cannot be altered at will. No particles, symmetries or interactions can be added or removed by hand. In this respect, we will discuss spontaneous CP breaking using non-abelian flavor symmetries from String Theory in the first part of this talk. However, in contrast to its predictability there is a huge (but finite) number of four dimensional String Theories, called the String Landscape, which asks for its exploration. A new approach using an Autoencoder Neural Network is presented in the second part of the talk.

gez. Peter Thirolf
Tel. 289-14064

gez. Norbert Kaiser
Tel. 289-12367