



**ARNOLD SOMMERFELD**  
CENTER FOR THEORETICAL PHYSICS



## **Sommerfeld Theory Colloquium**

**Wednesday, 9th February 2022**

at 16.15 h

**Prof. Hans Peter Nilles**

(Bonn University)

### **The "Flavor" of Particle Physics**

Most of the parameters of the Standard Model of particle physics are related to the masses and mixing angles of quarks and leptons. The fact that we do not understand the pattern of these parameters is known as the "flavor problem". A promising approach to address this problem is the consideration of (discrete nonabelian) flavor symmetries. It has recently been suggested that duality transformations of string theory could provide specific flavor symmetries of modular or symplectic type. The origin of the pattern of the flavor parameters is then determined through the geometry and the moduli space of compactified extra dimensions which exhibits a mechanism of "Local Flavor Unification".

A348, Theresienstr. 37 and via ZOOM

Dieter Lüst