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E I N L A D U N G

im Rahmen des Seminars für Mathematische Physik

(Joint TU/UV Theory Seminar)

zum Vortrag von

Abhiram KIDAMBI

(Max Planck Institute, Leipzig)

über

"Characterization of rational SCFTs: Complex Multiplication, Mirror Symmetry and Hodge Theory"

Abstract:

One is probably aware that classification of RCFTs has been studied at a steady and formal pace over the past few decades. But often when we are asked to define or characterize an RCFT who target spaces are X, there are different answers and characterisations. (X can be an abelian variety like a torus, or a an algebraic variety like K3 surfaces etc.)

Phenomenologically, rationality can explain things like electroweak gaugino dark matter, gauge coupling unification and small gravitino mass, and attribute them to large chiral algebra on the worldsheet string theory, and not to a larger symmetry of the spacetime field theory. Mathematically, Rational CFTs provide a physical way to determine points of arithmetic in the moduli space of a variety.

For the case of X = d dimensional tori, these various characterisations as I will explain are equivalent if and only if there are further conditions imposed and provide a sketch of proof. I will also discuss possible connections to random matrix theories and arithmetic of abelian varieties if time permits.

Zeit: Dienstag, 30.4.2024, 14:00h

Ort: Erwin-Schrödinger-Hörsaal, Fakultät für Physik, Boltzmanngasse 5, 5. Stock

Zoom-Link:
https://tuwien.zoom.us/j/4207073557?pwd=YVhUSVpZRnRMR3p0aXdsb1BmaXFwU
T09&omn=64465475582

gez.: S. Fredenhagen, D. Grumiller, T. Tran, A. Fiorucci