Fakultät für Physik
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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

Ilarion Melnikov

(James Madison Univ. / IPhT Saclay)

über

„Topology change and heterotic flux vacua“

Abstract:
I will review the status of heterotic flux compactification with 8 and 4 supercharges. The underlying geometry of these compactifications is a principal torus bundle over a K3 surface, and T-duality in the torus fiber leads to equivalences between topologically distinct configurations.
In particular, I will argue that all such vacua that preserve 8 supercharges can be related to more conventional (flux free) compactifications.
These dualities lead to a rich interconnected web of stringy geometries with a fairly direct worldsheet CFT interpretation.
Orbifolds of such configurations can partially break supersymmetry and reduce the gauge group rank. On the other hand, there are four-dimensional configurations that cannot be T-dualized to configurations without flux; these configurations place strong constraints on the underlying K3 geometry.
If there is time, I will also discuss these equivalences from the dual M-theory point of view.

Zeit: Dienstag, **31.10.2023, 14.00 h**

Ort: **Sem. R. DB gelb 03** **TU Wien** Freihaus, Wiedner Hauptstrasse 8, **3rd floor**, yellow tower).

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