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

Karapet Mkrtchyan

(Imperial College, London)

über

„Covariant Lagrangians for (twisted) self-duality equations of (non-)chiral p-forms and their Abelian interactions“

Abstract:
We present a covariant Lagrangian formulation for p-form fields in Minkowski spaces of arbitrary dimensions that treat electric and magnetic degrees of freedom on equal footing. This formulation allows the inclusion of arbitrary abelian self-interactions. In d=4k+2, we cover all abelian self-interactions of a chiral (self-dual) 2k-form, the most interesting example being d=6 (we also comment on d=2 and 10), where the general abelian self-interactions are parametrized by a function of one variable. For d=4k, we cover all abelian self-interactions of (2k-1)-forms, including those with SO(2) duality symmetry. For d=4, we give a simple democratic actionfor arbitrary non-linear electrodynamics involving an arbitrary function of two variables and its duality symmetric subclass manifesting SO(2) symmetry, parametrized by a function of one variable.
This construction, in particular, covers all interesting examples in the literature.

Zeit: Dienstag, **09.05.2023, 14.00 h**

Ort: TU - Sem.R. DA gruen 05 (Freihaus, TU Wien, Wiedner Hauptstrasse 8)

gez.: S. Fredenhagen, D. Grumiller, E. Batista, R. Ruzziconi