



EINLADUNG

im Rahmen des Seminars für Mathematische Physik
(Joint TU/UV Theory Seminar)

zum Vortrag

von

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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 action for 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