Contribution ID: **23** Type: **not specified**

Non-Anticommuting γ_5 in a Non-Abelian model at two loop

Tuesday 16 April 2024 10:00 (30 minutes)

We apply the mathematically consistent Breitenlohner-Maison-'t Hooft-Veltman scheme to the dimensional renormalization of chiral gauge theories. Anticommutativity of γ_5 is given up, which spuriously breaks gauge invariance at the regularized level, but can be repaired by finite counterterms.
With the Standard Model in mind, we study chiral toy models as prototypes, such as previously a Non-Abelian model with scalars at one loop and the Abelian case at two loops. This talk will focus on the advances for a generic Non-Abelian chiral model at two loop including the counterterm structure, an exposition of corresponding Slavnov-Taylor identities and Non-Abelian peculiarities.
Accompanying talks discuss the extension of the Abelian model to three loop as well as conceptual intricacies regarding the SM.

Primary author: KÜHLER, Paul (TU Dresden)

Co-authors: STÖCKINGER, Dominik (TU Dresden); WEISSWANGE, Matthias (TU Dresden)

Presenter: KÜHLER, Paul (TU Dresden)

Session Classification: Parallel 1