

## Gauge invariant regularization for perturbative chiral gauge theory

*Wednesday, 5 December 2018 15:00 (30 minutes)*

We propose a novel gauge-invariant regularization for the perturbative chiral gauge theory. Our method consists of the two ingredients: use of the domain-wall fermion to describe a chiral fermion with Pauli-Villars regulators and application of the dimensional regularization only to the gauge field. This regularization is implemented in the Lagrangian level, unlike other gauge-invariant regularizations (eg. the covariant regularizations). We show that the Abelian (fermion number) anomaly is reproduced correctly in this formulation.

**Presenter:** HAMADA, Yu (Kyoto University)

**Session Classification:** Poster Session & Tea Break