

# XVth Quark Confinement and the Hadron Spectrum



Contribution ID: 37

Type: Oral

## The standard model and the lattice

Monday 19 August 2024 14:00 (30 minutes)

The  $SU(3) \otimes SU(2) \otimes U(1)$  standard model maps smoothly onto a conventional lattice gauge formulation, including the parity violation of the weak interactions. The formulation makes use of the pseudo-reality of the weak group and requires the inclusion a full generation of both leptons and quarks. As in continuum discussions, chiral eigenstates of the Dirac operator generate known anomalies, although with rough gauge configurations these are no longer exact zero modes of the Dirac operator.

**Author:** CREUTZ, Michael (Brookhaven National Laboratory)

**Presenter:** CREUTZ, Michael (Brookhaven National Laboratory)

**Session Classification:** Vacuum Structure and Confinement

**Track Classification:** A: Vacuum Structure and Confinement