

# 26th International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY2018)



Contribution ID: 182

Type: **Talk (closed)**

## B-L Miracle as gauged PQ symmetry

*Thursday 26 July 2018 17:40 (20 minutes)*

The Peccei-Quinn (PQ) solution to the strong CP problem requires an anomalous global  $U(1)$  symmetry, the PQ symmetry. The origin of such a convenient global symmetry is quite puzzling from the theoretical point of view in many aspects. In this talk, we propose a simple prescription which provides an origin of the PQ symmetry. There, the global  $U(1)$  PQ symmetry is virtually embedded in a gauged  $U(1)$  PQ symmetry. Due to its simplicity, this mechanism can be implemented in many conventional models with the PQ symmetry. Finally, we also propose an attractive concrete model, where a gauged  $U(1)$  PQ symmetry corresponds to the B-L gauge symmetry.

### Parallel Session

Formal Field Theory and Strings

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**Session Classification:** Alternatives to Supersymmetry