



Contribution ID: 137

Type: **Talk**

Wilson Fermions with Four Fermion Interactions

Wednesday, 15 July 2015 15:20 (20 minutes)

We present a study of a chirally symmetric model of four fermion interactions, the Nambu Jona-Lasinio model, on the lattice with Wilson fermions. Four fermion interactions are a necessary part of many models of beyond Standard Model physics. In particular, they can couple the Standard Model fermions to a strongly interacting Higgs sector. In technicolor models they may cause spontaneous chiral symmetry breaking and modify the running coupling. As a first step, we study the restoration and spontaneous breaking of chiral symmetry in the lattice NJL model before adding a gauge interactions.

Primary author: Dr RANTAHARJU, Jarno (CP3-Origins)

Co-authors: Prof. HIETANEN, Ari (CP3-Origins); Prof. PICA, Claudio (CP3-Origins); Prof. MICHELE, Della Morte (CP3-Origins); Prof. SANNINO, Francesco (CP3-Origins); Dr DRACH, Vincent (CP3 Origins)

Presenter: Dr RANTAHARJU, Jarno (CP3-Origins)

Session Classification: Physics Beyond the Standard Model

Track Classification: Physics Beyond the Standard Model