



Contribution ID: 263

Type: **Parallel**

## Towards a composite Higgs and a partially composite top quark

*Friday, 21 June 2019 15:00 (20 minutes)*

We have calculated quantities of interest to a theory of compositeness. The lattice model, approximating the candidate theory, is the  $SU(4)$  gauge theory coupled to fermions in two color representations. For the composite Higgs, a current correlator gives one of the ingredients of the effective Higgs potential. For the partially composite top quark, we have hyperbaryon matrix elements that govern mixing of the fundamental quark with its heavy composite partner. The matrix elements turn out to be so small that the theory is disfavored as a source of a realistic top mass.

**Primary author:** SVETITSKY, Benjamin (Tel Aviv University)

**Co-authors:** HACKETT, Daniel (U. Colorado, Boulder); NEIL, Ethan (University of Colorado, Boulder); GOLTERMAN, Maarten (San Francisco State University); DEGRAND, Thomas (university of colorado); Dr AYYAR, Venkitesh (LBL, Berkeley); Dr JAY, William (Fermilab); Dr SHAMIR, Yigal (Tel Aviv University)

**Presenter:** SVETITSKY, Benjamin (Tel Aviv University)

**Session Classification:** Physics Beyond the Standard Model

**Track Classification:** Physics Beyond the Standard Model