Contribution ID: **164** Type: **not specified**

Higgs-Confinement Transitions in QCD from Symmetry Protected Topological Phases

Friday 7 June 2024 10:20 (30 minutes)

In gauge theories with fundamental matter, such as QCD, there is typically no sharp way to distinguish confining and Higgs regimes because there are no suitable order parameters. It is standard lore that these two regimes are continuously connected. In this talk I will discuss simple examples in which Higgsing and confinement lead to different symmetry protected topological phases, which are necessarily separated by a phase transition. Finally, I will show that this phenomenon also occurs in QCD at finite baryon density, and comment on possible implications for the QCD phase diagram and neutron stars.

Presenter: DUMITRESCU, Thomas (UCLA, USA)