Contribution ID: **17**                                                Type: **not specified**

# Regular black holes with exotic topologies

*Thursday 30 May 2019 10:30 (15 minutes)*

In this talk we will show that one can construct regular black holes solutions by reversing the Penrose singularity theorem and by tuning the null energy condition appropriately. In particular, we will show the existence of spherically symmetric regular black hole solutions with exotic topologies and we will classify them by using some kind of charge related to the trace of the energy momentum tensor computed at spatial infinity. Finally, possible links with Petrov changes and phase transitions will be briefly commented.

**Primary authors:**   Mr MELGAREJO, Gustavo (Universidad de Los Andes);  Dr BARGUEÑO, Pedro (Universidad de Los Andes)

**Presenter:**   Mr MELGAREJO, Gustavo (Universidad de Los Andes)

**Session Classification:**  Cosmology