Contribution ID: **70**   Type: **Talk**

A menagerie of hairy black holes

Friday, 24 July 2015 11:30 (1 hour)

According to the no-hair conjecture, equilibrium black holes are simple objects, completely determined by global charges which can be measured at infinity. This is the case in Einstein-Maxwell theory due to beautiful uniqueness theorems. However, the no-hair conjecture is not true in general, and there is now a plethora of matter models possessing hairy black hole solutions. In this talk we focus on one such matter model: Einstein-Yang-Mills (EYM) theory, and restrict our attention to four-dimensional, static, non-rotating black holes for simplicity. We outline some of the menagerie of EYM solutions in both asymptotically flat and asymptotically anti-de Sitter space. We attempt to make sense of this black hole zoo in terms of Bizon's modified no-hair conjecture.

Primary author: WINSTANLEY, Elizabeth (The University of Sheffield)

Presenter: WINSTANLEY, Elizabeth (The University of Sheffield)

Session Classification: Keynote Speaker plenary session 4

Track Classification: Keynotes