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Maxime Van de Moortel*, mcrv2@cam.ac.uk. *Stability and instability of charged scalar fields on black holes in spherical symmetry.*

The question of black holes stability is one of the central problems of Mathematical General Relativity. It impacts the interior structure of black holes, which is deeply linked to Penrose's Strong Cosmic Censorship Conjecture, stating that General Relativity is a deterministic theory.

This has been rather well understood for the Einstein–Maxwell-**Uncharged**-Scalar-Field model in spherical symmetry. That model however only admits two-ended black holes, unlike its **charged** analogue which allows for the more physically relevant one-ended black holes.

In this talk I will present my recent work about spherically symmetric charged scalar fields on black holes, featuring both stability and instability results, related to the asymptotic behavior of charged scalar fields on black hole spacetimes. (Received February 05, 2018)