

Contributed Talk

Name: Prado Martín-Moruno

Position: Staff

Affiliation: Universidad Complutense de Madrid

Title: Hawking-Ellis classification of the stress-energy tensor: test-fields versus back-reaction

Abstract: We consider the Hawking-Ellis classification of stress-energy tensors, both in the test-field limit, and in the presence of back-reaction governed by the usual Einstein equations. For test fields one can get a type IV stress-energy tensor via quantum vacuum polarization effects. However, in the presence of back-reaction driven by the ordinary Einstein equations the situation is often much more constrained. In particular, in many physically interesting situations once one includes back-reaction the more unusual stress-energy types are automatically excluded.