## **Contributed Talk**

Name: Miguel Duarte

Position: PhD Student

Affiliation: CAMGSD and CENTRA, Tecnico, Lisbon

Title: Peeling in Generalized Harmonic Gauge

**Abstract:** We show that a very large class of systems of non-linear wave equations, based on the good-bad-ugly model, admits polyhomogeneous expansions near null infinity. Exploiting these formal expansions of the metric components, the Peeling property of the Weyl tensor is revisited. The impact on the peeling property of the gauge choice and constraint additions is discussed. Finally, the special interplay between gauge and constraint addition, as well as its influence upon the asymptotic system and the decay of each of the metric components, is exploited to find a particular gauge which prevents the existence of logs to arbitrarily high order, hence recovering peeling.