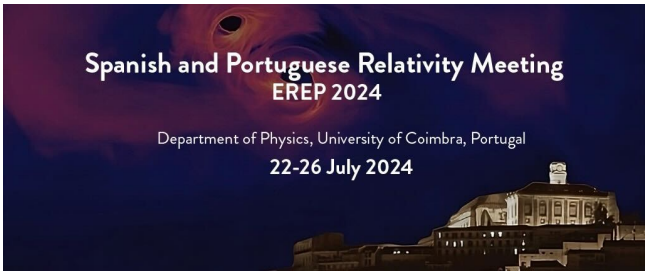


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# Reference metrics on hyperboloidal slices for free evolution

*Monday 22 July 2024 15:15 (15 minutes)*

Gravitational wave radiation is only unambiguously defined at future null infinity - the location in spacetime where light rays arrive and where global properties of spacetimes can be measured. Reaching future null infinity is thus very important for extracting correct waveforms. A convenient way to include it in numerical relativity simulations is via hyperboloidal foliations, which can be tackled using conformal compactification. Current efforts in this approach rely on a 4D time-independent background reference metric for the calculation of the source functions in the gauge conditions, which are a crucial part of the implementation. So far, this 4D reference metric was taken to be that of Minkowski spacetime as foliated by a constant-mean-curvature slice. This work aims to generalise this choice by considering other slicing options, constructed via the height function method. I will report on current progress and the options considered so far.

**Author:** VANO-VINUALES, Alex (GRIT, CENTRA, IST, University of Lisbon)

**Presenter:** VANO-VINUALES, Alex (GRIT, CENTRA, IST, University of Lisbon)

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