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Null hypersurfaces in spacetimes

Null hypersurfaces can not be handled with usual submanifold theory, but it is necessary to several important developments in relativity. Some techniques have been successfully used despite their limitations. In this talk we outline an extension of two of those techniques that extends much of the known results and provide new insight in the theory. The most important is that it provides an auxiliary Riemannian structure with reasonable coupling properties with the ambient metric. As a new tool, we explain its limitations as well as its improvements to gain confidence on it.