

1137-83-209

David Maxwell* (damaxwell@alaska.edu). *On the conformal method in the far-from CMC setting.*

The conformal method of generating solutions of the Einstein constraint equations in general relativity has been a cornerstone of initial data construction, both for theoretical purposes, and in numerical settings. The method has nearly ideal properties for the construction of constant-mean curvature (CMC) solutions of the constraint equations, and these carry over well to the non-CMC setting. Although there was reason, at one point, to hope that these good properties extend more generally, over the last several years we have gained some understanding of the shortcomings of the conformal method when applied to constructing far-from-CMC solutions. This talk gives an overview of the current state of affairs. (Received February 04, 2018)