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About conformal holonomy

Abstract: The canonical connection of conformal geometry gives rise to an invariant notion of holonomy for spaces with conformal structure. This conformal holonomy group is in general a subgroup of the Möbius group $SO(p+1, q+1)$ in signature (p, q) . I will discuss in my talk some aspects of conformal holonomy theory and its applications. In particular, I will discuss conformal Einstein spaces and the Fefferman construction. As application I will present results about zeros of conformal Killing spinors and an explicit construction of a family of Fefferman-Graham ambient metrics.