

“Blow-up phenomena for scalar-flat metrics on manifolds with boundary”

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Let (M,g) be a compact n -dimensional Riemannian manifold with boundary. In this talk we will be interested in the set of scalar-flat metrics on M which are in the conformal class of g and have the boundary as a constant mean curvature hypersurface. We will construct examples of metrics on the unit ball, in dimensions $n \geq 25$, for which this set is noncompact. These manifolds have umbilic boundary, but they are not conformally equivalent to the unit ball.