Bach-flat h-almost gradient Ricci solitons

Abstract:
On an n-dimensional complete manifold M, consider an h-almost gradient Ricci soliton, which is a generalization of gradient Ricci solitons and \((\lambda, n+m)\)-Einstein manifolds. In this talk, we show that if the manifold is Bach-flat and \(dh/du > 0\), then the manifold M is either Einstein or rigid. In particular, such a manifold has harmonic Weyl curvature. When the dimension of M is four, the metric is locally conformally flat.