1145-VO-2886   **James Dibble*** (`james-dibble@uiowa.edu`). *Central splitting of manifolds with no conjugate points.*

An unresolved question in Riemannian geometry is the extent to which rigidity results for nonpositively curved manifolds extend to the case of no conjugate points. It will be shown that each compact manifold with no conjugate points admits a family of functions whose integrals vanish exactly when central Busemann functions split linearly. These functions vanish when central Busemann functions are sub- or superharmonic. A consequence is that splitting theorems for nonpositively curved manifolds with nontrivial center generalize to those with no conjugate points and convex or concave central Busemann functions. (Received September 25, 2018)