1116-53-2047   **James Dibble*** (`jr-dibble@wiu.edu`). *Totally geodesic maps into manifolds with no focal points.*

A classical result of Eells–Sampson is that the set of harmonic maps in each homotopy class of maps between compact Riemannian manifolds, where the domain has non-negative Ricci curvature and the target non-positive sectional curvature, is non-empty and equal to the set of totally geodesic maps in that class. Hartman further proved that this set is path-connected. It will be shown that these results generalize to energy-minimizing maps into targets with no focal points. These are manifolds whose universal covers satisfy a simple synthetic condition: Each point and maximal geodesic are connected by a unique geodesic that intersects the latter perpendicularly. By contrast with previous approaches, the proof uses neither a geometric flow nor the Bochner identity for harmonic maps. (Received September 21, 2015)