

Meeting: 1000, Albuquerque, New Mexico, SS 8A, Special Session on Interactions in Riemannian Geometry

1000-53-85 **Ye-Lin Ou*** (y1ou@ou.edu), Department of Mathematics, University of Oklahoma, Norman, OK
73019. *p-harmonic morphisms, minimal foliations, and rigidity of metrics.*

A p -harmonic map ($1 < p < \infty$) is a critical point of the p -energy functional. 2-harmonic maps are usually called harmonic maps which include geodesic, harmonic functions and minimal isometric immersions as examples. P -harmonic morphisms are maps between Riemannian manifolds that preserve solutions of p -Laplace's equation. These maps are characterized as horizontally weakly conformal p -harmonic maps, so locally they are solutions of an over-determined system of PDEs. In this talk, we will present some results on the construction and classification of p -harmonic morphisms between certain moduli spaces. We also study the links among p -harmonic morphisms, minimal foliations, and rigidity of metrics. (Received August 17, 2004)