Minisymposium 11 - Geometrische Analysis

On weakly harmonic maps from Finsler to Riemannian manifolds

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(JOINT WORK WITH S.WINKLMANN)

We discuss weakly harmonic maps from Finsler manifolds into Riemannian manifolds and prove Hölder estimates for such mappings whose image is contained in a regular ball of the target manifold. These estimates generalize results of Giaquinta, Hildebrandt and Hildebrandt, Jost, Widman for weakly harmonic maps between Riemannian manifolds. As an application of the interior a priori estimates we obtain a Liouville theorem for entire harmonic maps from Finsler manifolds. The global estimates in conncetion with a uniqueness result of Jäger and Kaul lead to an existence theorem for such harmonic maps.