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The rectified n-harmonic map flow with applications to homotopy classes

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Abstract. We introduce a rectified n-harmonic map flow from an n-dimensional closed Riemannian manifold to another closed Riemannian manifold. We prove existence of a global solution, which is regular except for a finite number of points, of the rectified n-harmonic map flow and establish an energy identity for the flow at each singular time. Finally, we present two applications of the rectified n-harmonic map flow to minimizing the n-energy functional and the Dirichlet energy functional in a homotopy class.

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