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**Harmonic maps from Finsler manifolds.** (English) Zbl 0996.53047

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**Summary:** A Finsler manifold is a Riemannian manifold without the quadratic restriction. In this paper we introduce the energy functional, the Euler-Lagrange operator, and the stress-energy tensor for a smooth map  $\varphi$  from a Finsler manifold to a Riemannian manifold. We show that  $\varphi$  is an extremal of the energy functional if and only if  $\varphi$  satisfies the corresponding Euler-Lagrange equation. We also characterize weak Landsberg manifolds in terms of harmonicity and horizontal conservativity. Using the representation of a tension field in terms of geodesic coefficients, we construct new examples of harmonic maps from Berwald manifolds which are neither Riemannian nor Minkowskian.

**MSC:**

**53C60** Global differential geometry of Finsler spaces and generalizations  
(areal metrics)

**53C43** Differential geometric aspects of harmonic maps

Cited in **1** Review  
Cited in **21** Documents

**Keywords:**

energy functional; Euler-Lagrange operator; stress-energy tensor; weak Landsberg manifolds; Berwald manifolds