Research Highlight: On a class of rotationally symmetric p-harmonic maps

Work of

Dr. L. F. Cheung, Department of Mathematics, The Chinese University of Hong Kong Professor C. K. Law, Department of Applied Mathematics, National Sun Yat-Sen University

Associate Professor LEUNG Man Chun (NUS)

This article can be considered as part III of a series. The paper gives a classification of rotationally symmetric p-harmonic maps between some model spaces, such as Euclidean n-space and the hyperbolic n-space. The article contains results which show that, when p > 2 and $n \ge 2$, all rotationally symmetric p-harmonic maps from Euclidean n-space to the hyperbolic n-space have to blow up at a finite point. Whereas all rotationally symmetric p-harmonic maps from the hyperbolic n-space to itself observe the trichotomy property, that is, the map is the identity map, is bounded or blows up according as its initial value (at 0) is equal to, less than or greater than one. The sharp estimates imply and improve a number of previously known existence and non-existence results of certain p-harmonic maps on non-compact manifolds.

References:

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