Minimal surfaces and the energy of links

Fernando Coda

IMPA

Abstract:

Freedman, He, and Wang conjectured in 1994 that the Mobius energy should be minimized, among the class of all nontrivial links in Euclidean space, by the stereographic projection of the standard Hopf link. In this talk I will report on joint work with Ian Agol and Andre Neves in which we prove that statement using the min-max theory of minimal surfaces. We reduce the problem to a question about the area of minimal surfaces in the three-sphere.