Joseph Hoisington (z.Zt. Max-Planck Institut Bonn)

Calibrations and energy-minimizing mappings of rank-1 symmetric spaces

Abstract: We will establish lower bounds for energy functionals of mappings from real, complex and quaternionic projective spaces to Riemannian manifolds. For real and complex projective spaces these lower bounds are sharp, and we will characterize the family of energy minimizing maps which arise in these results. We will discuss the connections between these results and several theorems and questions in systolic geometry.