

Seminar

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The supersymmetric nonlinear sigma model: Harmonic maps coupled to spinor fields

Wednesday, August 23, 2017

at 15:30 h

ESI, Boltzmann Lecture Hall

Abstract: We will discuss the functional of the supersymmetric nonlinear sigma model as a geometric variational problem. In the case of a Riemannian domain its critical points couple the harmonic map equation to spinor fields, these became known as Dirac-harmonic maps and variants thereof in the mathematics literature. We will give an overview of the current known results on the geometric and analytic properties of the critical points. Finally, we will present recent work on the existence problem for Dirac-wave maps, which are Dirac-harmonic maps from a Lorentzian domain.

P. Chruściel, M. Eichmair

August 11, 2017