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Title: Schrödinger flow near harmonic maps”.

Abstract:

For the Schrödinger flow from $R^2 \times R^+$ to the 2-sphere S^2 , it is not known if finite energy solutions can blow up in finite time. We study equivariant solutions whose energy is near the energy of the family of equivariant harmonic maps. We prove that such solutions remain close to the harmonic maps until the blow up time (if any), and that they blow up if and only if the length scale of the nearest harmonic map goes to zero. This is joint work with Stephen Gustafson and Kyungkeun Kang.