INFINITE TIME BLOW-UP SOLUTIONS TO THE ENERGY CRITICAL WAVE MAPS EQUATION

MOHANDAS PILLAI

This talk will be about the wave maps problem with domain \mathbb{R}^{2+1} and target \mathbb{S}^2 in the 1-equivariant, topological degree one setting. In this setting, we recall that the soliton is a harmonic map from \mathbb{R}^2 to \mathbb{S}^2 , with polar angle equal to $Q_1(r) = 2 \arctan(r)$. By applying the scaling symmetry of the equation, $Q_{\lambda}(r) = Q_1(r\lambda)$ is also a harmonic map, and the family of all such Q_{λ} are the unique minimizers of the harmonic map energy among finite energy, 1-equivariant, topological degree one maps.

In this talk, I will discuss how to construct a collection of infinite time blowup solutions along the Q_{λ} family, with a symbol class of possible asymptotic behaviors of λ .