

Threshold phenomena for critical wave equations

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I'll discuss recent results on stability/instability of soliton type solutions for certain critical wave equations, such as the critical wave maps problem or the focussing critical NLW in three dimensions. In particular, I'll focus on exotic blow up dynamics, and threshold dynamics associated with center stable manifolds. These results aim at the goal of revealing all possible dynamics resulting from data in a small neighborhood (in a suitable topology) of the soliton type solution.