

Abstract

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“Geometric analysis of dispersive flows”

We study the initial value problems for some dispersive flows for closed curves into compact almost Hermitian manifolds, which are compact almost complex manifolds equipped with Hermitian metric. In other words, we consider the motion of closed curves on manifolds subject to dispersive partial differential equations of order two, three or four. These equations are the geometric generalization of model equations arising in classical mechanics. We show the relationship between the short-time existence theorems and the geometric settings of the target manifolds, e.g., Kähler condition, curvature condition and etc.