

# Investigation of Some Surfaces Related to Nonlinear Schrödinger Equation

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This study examines the geometric structure of the nonlinear Schrödinger (NLS) equation. The associated Hasimoto surface is analyzed, and its geometric invariants are expressed. It is further shown that the parameter curves of the NLS surface correspond to geodesics, providing a geometric interpretation of the equation. These results highlight the intrinsic link between soliton theory and differential geometry.