

Injectivity and Stability of the Scattering Map for Nonlinear Schrödinger Equations with Coefficients in Lorentz Spaces

Jayden Julián Bejarano González¹

¹ UFMG, jhayden@ufmg.br

Abstract

We consider nonlinear Schrödinger equations with spatial coefficients in Lorentz spaces $L^{p,\infty}(\mathbb{R}^d)$, with $1 < p \leq \infty$. This extends Chen and Murphy's approach in *Stability estimates for the recovery of the nonlinearity from scattering data*, where they consider bounded coefficients with bounded derivatives. Here, we prove the injectivity of the scattering map and obtain a quantitative stability estimate.

References

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