Calderón-Zygmund Analysis Seminar

Monday, Dec 10th, 3:45 pm, Eckhart 202

Scattering for the 3D Gross-Pitaevskii equation

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Abstract. We study the Cauchy problem for the 3D Gross-Pitaevskii equation. Global well-posedness in the natural energy space was proved by Gerard. We prove scattering for small data in the same space with some additional angular regularity, and in particular in the radial case we obtain small energy scattering. The crucial ingredients are new generalized Strichartz estimates and some new observed "NULL" structures of the Gross-Pitaevskii equation after some normal form type transform. This is a joint work with Zaher Hani and Kenji Nakanishi.