Mathematics, Statistics, and Computer Science   **@ UIC**

Applied Mathematics Seminar

Derivation of NLS and uniqueness of solutions to the Gross-Pitaeskii hierarchy

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Abstract: The derivation of NLS has been a hot topic in math physics during the past few decades. A lot of interesting results flourished this area in both physics side and mathematical side. We will introduce one of the successful methods - the BBGKY approach in this talk and describe how to use it to derive a certain type of NLS. As a main part in the derivation, the establishment of the uniqueness on solutions to the limiting hierarchy is essential. We will briefly review the different proofs on the uniqueness part and present a recent progress in this line on solutions of lower regularity.

Monday, November 10 at 4:00 PM in SEO 636