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Thomas Chen* (tc@math.utexas.edu), Department of Mathematics, The University of Texas at Austin, 1 University Station, C1200, Austin, TX 78712, and **Natasa Pavlovic** and **Nikolaos Tzirakis**. *On the Cauchy problem and blowup of solutions for the Gross-Pitaevskii hierarchy.*

We report on some recent results about the well-posedness of the Cauchy problem for the so-called Gross-Pitaevskii hierarchy, which describes a system of infinitely many interacting bosons in a mean field limit. We introduce a new conserved functional describing the energy per particle, and prove that whenever it is negative, blowup occurs on the L2 critical and supercritical level. This is based on work of Chen-Pavlovic-Tzirakis. Moreover, some recent results about global well-posedness are surveyed, which are due to work of Chen-Pavlovic. (Received August 18, 2009)