Modelling of rotating Bose-Einstein condensates

XAVIER BLANC

Lab. Jacques-Louis Lions, Univ. Paris 6 (FRANCIA) ${\bf blanc@ann.jussieu.fr}$

Resumen

We will review the modelling of rotating Bose-Einstein condensates. Starting from quantum N-body, we will explain its link with the celebrated Gross-Pitaevskii energy, and the nucleation of vortices. We will also review some modelling and mathematical issues concerning the fractional quantum Hall effect.