THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Mathematical Analysis and Applications Seminar

Room 261, Ziskind Building
on Tuesday, Feb 10, 2015
at 11:15

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Grounds states of the stationary Choquard equations

Abstract:

The Choquard equation, also known as the nonlinear Schrödinger-Newton equation is a nonlinear Schrödinger type equation where the nonlinearity is coupled with a nonlocal convolution term given by an attractive gravitational potential. We present recent results on the existence, positivity, symmetry and optimal decay properties of ground state solutions of stationary Choquard type equations under various assumptions on the decay of the external potential and the shape of the nonlinearity. This is a joint work with Jean Van Schaftingen (Louvain-la-Neuve, Belgium)