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Existence and concentration of solitary waves for a class of quasilinear Schrödinger Equations

In this talk we prove the existence and qualitative properties of positive bound state solutions for a class of quasilinear Schrödinger equations in dimension $N \geq 3$. We rely on a penalization technique, in a nonstandard Orlicz space context, to build up a one parameter family of classical solutions which have finite energy and exhibit, as the parameter goes to zero, a concentrating behavior around some point which we localize.