# EXISTENCE, SYMMETRY AND STABILITY RESULTS FOR SOME QUASI-LINEAR ELLIPTIC EQUATIONS

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For a general class of autonomous quasi-linear elliptic equations on $R^n$ we discuss the existence of a least energy solution and show that all least energy solutions are radially symmetric up to a translations. We also discuss some recent achievements on the stability and instability features (of ground states) for a physically relevant quasi-linear Schrödinger equation arising in plasma physics and fluid mechanics. The content of the talk is based upon some joint works with Louis Jeanjean.