

# ON A CLASS OF KIRCHHOFF ELLIPTIC EQUATIONS INVOLVING CRITICAL GROWTH AND VANISHING POTENTIALS

PEDRO UBILLA \*

We establish the existence of positive solutions for a class of stationary Kirchhoff type equations defined in the whole  $\mathbb{R}^3$  involving critical growth in the sense of the Sobolev embedding and potentials which decay to zero at infinity in some direction. In order to obtain the solution we used minimax techniques combined with an appropriated truncated argument, and a priori estimates. This results are new even for the local case which corresponds to nonlinear Schrödinger equations.

Joint work with J.M. do O(UFPB) and M.A. Souto(UFCG).

---

\*Department of Mathematics, Universidad de Santiago de Chile, email: pedro.ubilla@usach.cl