

Méthodes topologiques en analyse non linéaire:développements récents -
Conférence à la mémoire du Professeur Andrzej Granas
4 - 8 juillet 2022

Topological Methods in Nonlinear Analysis: Recent Advances - Conference
in memory of Professor Andrzej Granas
July 4 - 8, 2022

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Standing wave solutions of Schrodinger equations with Kato- Rellich type potentials

We shall study the existence and bifurcation from infinity of standing waves for Schrodinger equations with Kato-Rellich type potentials. Some necessary and sufficient conditions expressed in terms of Landesman-Laser and sign type inequalities are provided. Our approach is based on Conley index and topological degree techniques applied to the parabolic semiflow generated by the Schrodinger operator.

Results are obtained in collaboration with P. Kokocki and W. Kryszewski.