Some remarks on elliptic problems involving the Hardy potential

Ireneo Peral Alonso

Departamento de Matemáticas, UAM, Campus de Cantoblanco 28049 Madrid, España [ireneo.peral@uam.es]

2000 Mathematics Subject Classification. 35D05(primary); 35J10, 35J60, 46E30(secondary).

We analyze some semi-linear elliptic problems involving the Hardy potential. In this talk we focus the attention in the role that plays the position of 0 in $\overline{\Omega}$.

We also survey some recent results involving competition between Hardy potential and gradient terms.

The results in the talk are contained in collaborations with J.D. Dávila (Universidad de Chile, Chile) and B. Abdellaoui (Université Aboubekr Belkaïd, Tlemcen, Algeria), respectively.

This spring I miss a smile...