

The effect of a potential well's topology on a fractional NLS equation

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We consider a fractional nonlinear elliptic equation on \mathbb{R}^N without Nehari constraint. We address the problem to relate the number of its positive solutions to the topology of a potential well. By the aid of a fractional center of mass, introduced by a suitable seminorm, and regularity results based on fractional De Giorgi classes, we provide new existence and concentration results of solutions.

This is a joint paper with Marco Gallo (*Università degli Studi di Bari Aldo Moro*).