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Bound and ground states for a family of singular systems in $\mathbb{R}^N$

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In this talk we will focus on the solvability of a family of nonlinear elliptic systems defined in $\mathbb{R}^N$. Such equations contain Hardy type potentials and criticalities in Sobolev or Hardy-Sobolev sense coupled by a possible critical term. By means of variational techniques, we shall find ground and bound states in terms of the coupling parameter ν and the order of the different parameters and exponents. Actually, for a wide range of parameters we find solutions as minimzers or Mountain-Pass critical points of the energy functional on the underlying Nehari manifold.

References

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