

Fractional elliptic systems with noncoercive potentials

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Abstract. In this talk we study the existence of weak solution for a class of fractional elliptic systems of gradient type. The potentials are bounded from below and may change sign. One of them can be also bounded from above. The nonlinearity term is smooth and it can be asymptotically linear or superlinear at infinity. We consider also an interaction with the eigenvalues of the linearized problem and the nonlinear term. In the proofs we apply Variational Methods by considering both the resonant and non-resonant case. Our results are new even if we consider the local case.