

# Quantum embedding with lower bounds

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We present quantum embedding theories based on relaxations of the many-body ground state eigenvalue problem, as well as tractable optimization approaches for solving these relaxations. Specifically, we consider two relaxation paradigms that are ultimately quite different. The first of these is phrased in terms of quantum marginals or reduced density operators. The second (which is specific to fermions) involves impurity problems in the style of DMFT and DMET.