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Ferromagnetic ordering of energy levels

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Abstract

With Bruno Nachtergaele and Wolfgang Spitzer, we investigated ferromagnetic ordering of energy levels, a ferromagnetic version of the well known Lieb–Mattis theorem. Combining this with Bethe’s ansatz one can see that the lowest energy excitations above the all-up-spin ground state of the ferromagnetic XXZ model are physical droplets of down-spins. I will describe this and other implications of FOEL.