

Dimerisation in quantum spin chains

Daniel Ueltschi *

daniel@ueltschi.org

We consider a quantum spin chain whose nearest-neighbour interactions are given by the projection onto spin singlets. It is expected that the ground state is dimerised when the spin is larger than 1. We prove it for large enough spins.

Joint work with Bruno Nachtergaele.

*Department of Mathematics, University of Warwick, Zeeman Building, Coventry, Warwickshire CV4 7AL, UNITED KINGDOM