

Condensed Matter Seminar

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Numerical Studies of 2D Frustrated and Doped Quantum Systems

The density matrix renormalization group (DMRG) is primarily a 1D simulation method for quantum lattice systems which can also study 2D strips and ladders. Two recent advances greatly improve our ability to study ordering in 2D systems. I will discuss two systems of current interest: the triangular lattice Heisenberg model, a frustrated system where RVB and antiferromagnetic phases compete, and the doped t-J model, where stripes and d-wave superconductivity may coexist or compete.

Thursday, April 24 , 2008
4:10PM Room 416 PHY/GEO