June 13 (Fri.) 11:30 – 12:30

Analytic results on the Gutzwiller wave function

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Recently we have obtained the simple analytic expression of the density matrix for Gutzwiller wave function in one dimension with the exclusion of double occupancy per site. This Gutzwiller wave function is the exact ground state of the supersymmetric t-J model with the inverse square interaction. In this talk, I review the known results on the dynamics in the one dimensional system with the inverse square interaction, and introduce the recent result.