Abstract Submitted
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Minimally entangled typical thermal states of fermions in DMRG++[1] GONZALO ALVAREZ, Oak Ridge National Laboratory — I will discuss the minimally entangled typical thermal states (METTS) algorithm (developed by White in PRL 2009) in the context of fermionic systems such as the Hubbard model. The additional idea here (http://prb.aps.org/abstract/PRB/v87/i24/e245130) is to combine METTS with the Krylov-space approach to evolve the classical product states in imaginary time. The issues to be addressed include ergodicity, "collapse" bases, and convergence. For the temperature dependence of the superconducting correlations, METTS will be shown to yield the correct exponential decay with distance, and exponents proportional to the temperature at low temperatures. The talk will conclude with a few remarks about recent directions and future plans for DMRG++ (`https://web.ornl.gov/~gz1/dmrgPlusPlus/`) and related codes.

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