

Abstract Submitted  
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**Diagrammatic Monte Carlo for Dual Fermions** SERGEI ISKAKOV,  
EMANUEL GULL, Univ of Michigan - Ann Arbor — The dual fermion series is a diagrammatic extension of the dynamical mean field theory that includes non-local dynamic correlations. Evaluating this series analytically has proven to be challenging. In this talk we show results for a diagrammatic Monte Carlo method that stochastically samples two-particle vertex diagrams of the dual fermion perturbation series. We present an introduction to the method and show applications to correlated systems.

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