

Abstract Submitted  
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**Impact of nearest-neighbor repulsion on superconducting pairing in 2D extended Hubbard model**<sup>1</sup> MI JIANG, U.R. HAHNER, Institute for Theoretical Physics, ETH Zurich, T.A. MAIER, Computer Science and Mathematics Division and Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, T.C. SCHULTHESS, Institute for Theoretical Physics, ETH Zurich — Using dynamical cluster approximation (DCA) with an continuous-time QMC solver for the two-dimensional extended Hubbard model, we studied the impact of nearest-neighbor Coulomb repulsion  $V$  on d-wave superconducting pairing dynamics. By solving Bethe-Salpeter equation for particle-particle superconducting channel, we focused on the evolution of leading d-wave eigenvalue with  $V$  and the momentum and frequency dependence of the corresponding eigenfunction. The comparison with the evolution of both spin and charge susceptibilities versus  $V$  is presented showing the competition between spin and charge fluctuations.

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