

Abstract Submitted
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Nearest-Neighbor Repulsion and Competing Charge and Spin Order in the Extended Hubbard Model. DAVOUDI BAHMAN, A.-M.S. TREMBLAY¹, Universite de Sherbrooke — We generalize the Two-Particle Self-Consistent (TPSC) approach to study the extended Hubbard model where the nearest-neighbor interaction V is present in addition to the local interaction U . Our results are in good agreement with available Quantum Monte-Carlo results over the whole range of density n up to intermediate coupling. As a function of U, V and n we observe different kinds of charge and spin orders, like commensurate/incommensurate charge and spin density wave, phase separation, and ferromagnetic order. For attractive V superconductivity could exist in the regions where the other types of charge and spin orders do not dominate. Ref.: B. Davoudi and A.-M.S. Tremblay, cond-mat/0509707

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