Nearest-Neighbor Repulsion and Competing Charge and Spin Order in the Extended Hubbard Model. DAVOUDI BAHMAN, A.-M.S. TREMBLAY\textsuperscript{1}, 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 ferrimagnetic 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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