

Abstract Submitted  
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**Attractive Hubbard model with inhomogeneous interactions**<sup>1</sup> VI-JAY B. SHENOY, Indian Institute of Science, Bangalore — I shall discuss the phase diagram of the attractive Hubbard model with spatially inhomogeneous interactions obtained using a single site dynamical mean field theory like approach. The model is characterized by three parameters: the interaction strength, the active fraction (fraction of sites with the attractive interaction), and electron filling. I show that in a parameter regime with intermediate values of interaction strength (compared to the bare bandwidth of the electrons), and intermediate values of the active fraction, “non-BCS” superconductivity is obtained. The results of this work are likely to be relevant to many systems with spatially inhomogeneous superconductivity such as strongly correlated oxides, systems with negative  $U$  centers etc.

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