Effective Spin Fluctuation Models for the Cuprates

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I present results for cuprate superconductors based on a phenomenological model of electrons interacting with spin fluctuations in the d-wave super-conducting state – in particular the spectral lineshapes as measured by angle resolved photoemission and scanning tunneling spectroscopy. To be emphasized are the contribution of the bosonic modes to the normal and anomalous self-energies, how these show up in ARPES and tunneling spectra, their effect on the low energy and high energy fermionic dispersions, and the impact these studies have on the question of the "pairing glue" in the cuprates.