

# Unconventional superconductivity from strong real-space correlations: From cuprates to twisted bilayer graphene

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We overview briefly our recent results concerning the application of the diagrammatic expansion in both direct- and reciprocal-space for the Gutzwiller-type wave function (DE-GWF and  $\mathbf{k}$ -DE-GWF, respectively) to the unconventional superconductivity in selected strongly correlated systems. The concrete examples considered here are the cuprates [1, 2], UGe<sub>2</sub> [3], and twisted bilayer graphene [4]. In the latter two cases only the leading-order results have been analyzed in detail so far. The most important feature of our results is direct relation to experiment in a semi-quantitative manner.

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