

$$\Sigma^k =$$

The diagram represents the expansion of the self-energy Σ^k into three terms:

- First term:** A fermion line with incoming momentum $k;1$ and outgoing momentum $k;2$. A wavy line labeled $\mathcal{U}_{1234}^{q=0}$ connects the line to a fermion loop.
- Second term:** A fermion line with incoming momentum $k;1$ and outgoing momentum $k;2$. A wavy line labeled \mathcal{U}_{1432}^q connects the line to itself.
- Third term:** A fermion line with incoming momentum $k;1$ and outgoing momentum $k;2$. A loop structure is attached, consisting of a circle labeled $\mathcal{U}^{qkk'}$ and a rectangle labeled $F_{dc23}^{qkk'}$, connected by curved lines with arrows.