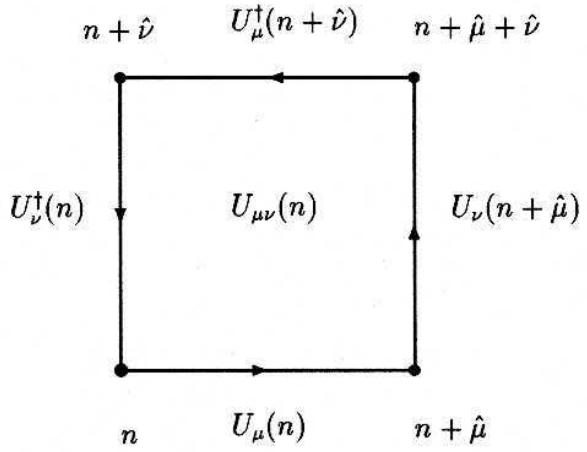
Wilson plaquets:



$$U_\Box \equiv U_n^\mu U_{n+\hat{\mu}}^\nu U_{n+\hat{\nu}}^{\mu\dagger} U_n^{\nu\dagger}$$

with

$$S_{QCD}^E = S_G + S_F$$

gluonic action:

$$S_G = \beta \sum_\Box (1 - \frac{1}{3}\mathrm{ReTr}U_\Box) \qquad \beta = \frac{6}{g^2}$$

fermionic action:

$$S_F = \sum_{n,m} \bar{\psi}_n K_{nm}[U] \psi_m$$