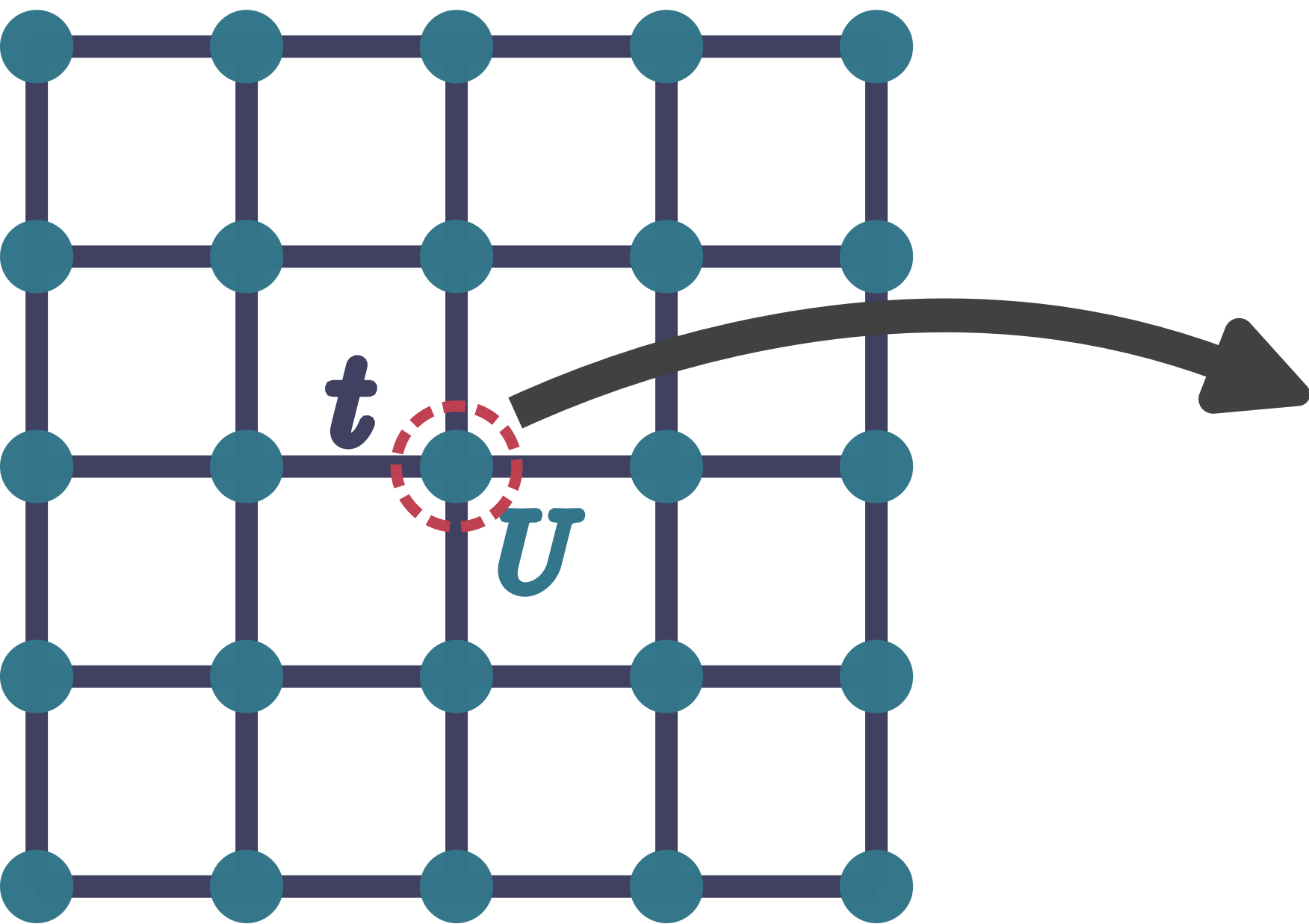**2D Hubbard Model**

SIAM (Auxiliary Model)

system-bath coupling

U

impurity site (system)

$\{\varepsilon_k\}$

$\Sigma_k(\omega)$

effective bath (rest of system)