

In the Bethe lattice case, the self consistency condition is simply (see <https://triqs.github.io/cthyb/latest/guide/dmft.html> and https://triqs.github.io/triqs/latest/userguide/python/dmft_one_page.html)

$$G_0^{-1}(i\omega_n) = i\omega_n + \mu - t^2 G(i\omega_n), \quad (1)$$

where $2t$ is the half bandwidth and $t=0.5$. This means the hybridization function is simply

$$\Delta(i\omega_n) = t^2 G(i\omega_n). \quad (2)$$

The DMFT procedures are following:

1. At the initial time, set $J(\varepsilon) = \frac{1}{2\pi t} \sqrt{1 - (\varepsilon/2t)^2}$ and

$$G(i\omega_n) = \int_{-2t}^{2t} \frac{J(\varepsilon)}{i\omega_n - \varepsilon} d\varepsilon. \quad (3)$$

Accordingly, $\Delta(i\omega_s) = t^2 G(i\omega_s)$.

2. Compute $G(i\omega_n)$, and set new $\Delta(i\omega_n) = t^2 G(i\omega_n)$

The number of mesh points for $i\omega_s$ is totally 2050 for both positive and negative parts, and number of mesh points for τ is 10001.