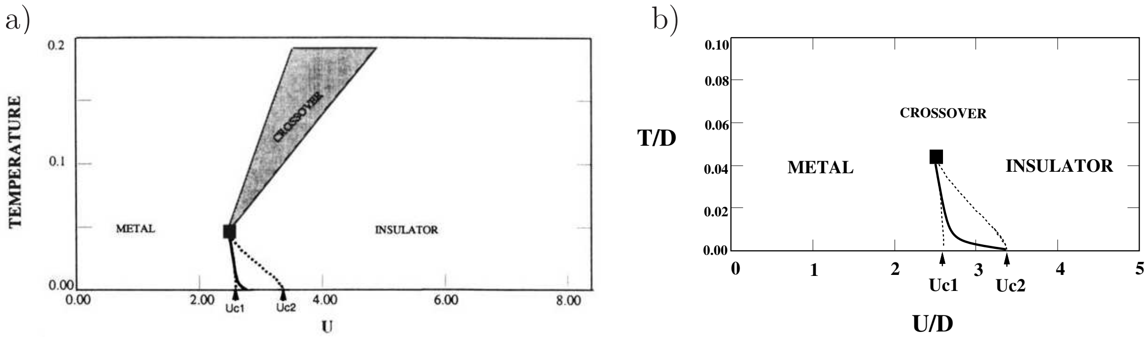

Figure 3.7: IPT phase diagram of the fully frustrated Bethe lattice. A coexistence region extends from $U_{c1}(0)/D = 2.6$ to $U_{c2}(0)/D = 3.3$ at $T = 0$. The second order end point of the first-order MIT (thick line) is at $T^*_{\text{IPT}}/D = 0.044$, $U^*_{\text{IPT}}/D = 2.51$. **a)** Original version with $U_c(T) \approx U_{c1}(T)$ for all temperatures (Rozenberg et al., 1994). **b)** Version in review with $U_c(0) = U_{c2}(0)$ (Georges et al., 1996). Scales in a) correspond to $t^{*2} = 1/2$. In both plots, the numerical values have to be doubled for the scaling $t^{*2} = 1$ used in this work (half bandwidth $D = 2$).

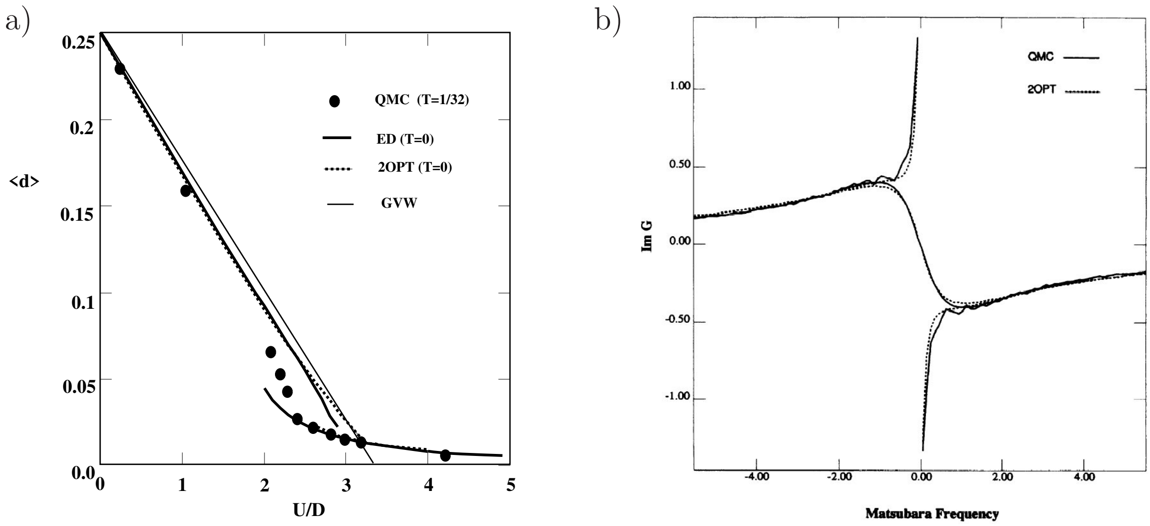

Figure 3.8: a) Double occupancy, here denoted as $\langle d \rangle$. Zero temperature results from IPT (here denoted as "2OPT") and ED of an 8-site cluster are compared to an estimate using the Gutzwiller wave function (GVW) and a finite-temperature QMC calculation at $T/D = 1/32$ (Georges et al., 1996). Note the agreement of IPT, ED, and even (finite-temperature) QMC in the insulating phase. Significant discrepancies between ED and IPT arise in the interesting region $U/D \approx 3$. **b)** Coexisting metallic and insulating solutions $\operatorname{Im} G(i\omega_n)$ for $U/D = 2.8$ and $T/D = 1/64$ in good agreement between IPT (dotted smooth lines) and QMC (solid noisy lines) (Rozenberg et al., 1994).