

$H^{(1,1)}$ $H^{(2,2)}$ $\phi_{n+1}^{(1,1)}$ $\phi_{n+1}^{(2,2)}$ $\phi_n^{(1,1)}$ $\phi_n^{(2,2)}$ \vdots \vdots $\phi_3^{(1,1)}$ $\phi_3^{(2,2)}$ \vdots \vdots $\phi_2^{(1,1)}$ $\phi_2^{(2,2)}$ $E_2^{(1)}$ $E_2^{(2)}$ $\phi_1^{(1,1)}$ $\phi_1^{(2,2)}$ $E_0^{(1)} = 0$ $E_0^{(2)} = 0$ $\phi_0^{(1,1)}$ $E_0^{(1)} = 0$ B^\dagger B 