

$$\begin{aligned}\Sigma_{\text{COH}}^{static}(\mathbf{r}, \mathbf{r}') &= \frac{1}{2} \delta(\mathbf{r} - \mathbf{r}') W_p(\mathbf{r}, \mathbf{r}'; E = 0) \\ &= \frac{1}{2} \delta(\mathbf{r} - \mathbf{r}') (W - v),\end{aligned}$$