

$$E_B = A_B^{-1}D = Q U Q^H$$

$$\begin{aligned} E_B^\lambda &= (A_B + \lambda D_B)^{-1}D_B = (I + \lambda E_B)^{-1}E_B \\ &= Q(I + \lambda U)^{-1}UQ^H \end{aligned}$$