Figure 1: An illustration for the proof of lem:A_i, where $\mathbb{k}_{p,q}$, $\mathbb{k}_{p-1,q}$, $\mathbb{k}_{p+1,q}$, $\mathbb{k}_{p,q-1}$ and $\mathbb{k}_{p,q+1}$ are values of κ on the fine elements respectively, the oversampling coarse element K_i^m with $m = 2$ is filled with gray and also decorated with dashed borderlines, and the fine element in the top-left corner of K_i^m is highlighted.