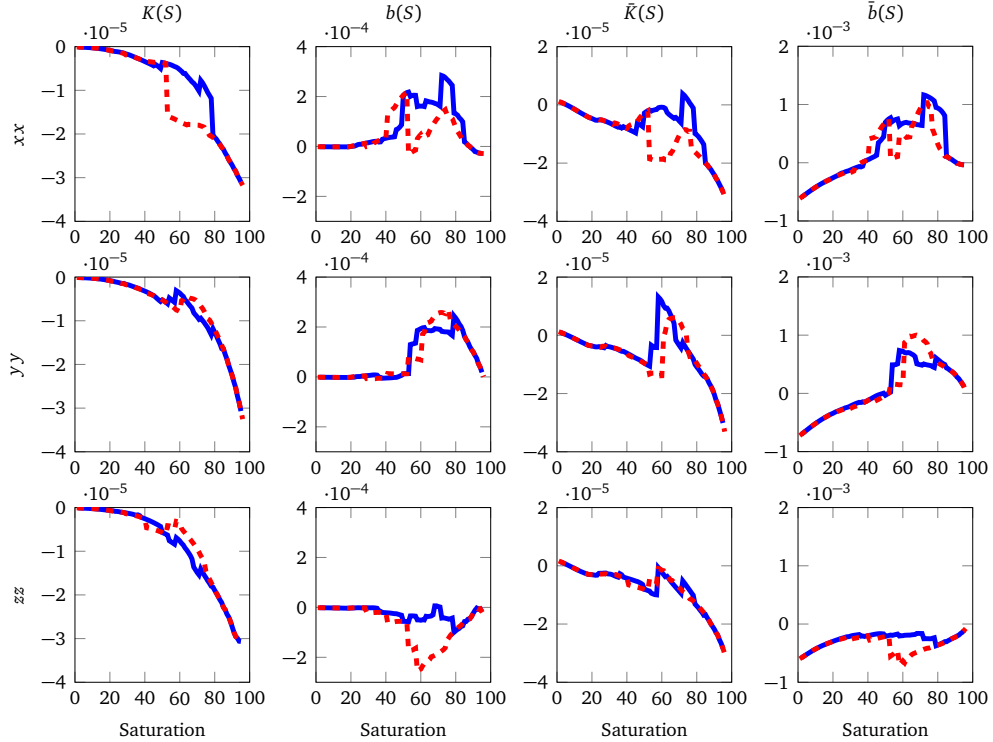


(a) Contact angle 20°



(b) Contact angle 0°

Figure 1: The components of $K(S)$, $b(S)$, $\bar{K}(S)$ and $\bar{b}(S)$ defined in equations (2.4). S is the relative water saturation of the pore space, $K(S)$ and $b(S)$ are the average velocities of the water for a unit drop in capillary and combined pressure, respectively. $\bar{K}(S)$ and $\bar{b}(S)$ are the average velocities of both the water and the air for a unit drop in capillary and combined pressure, respectively.