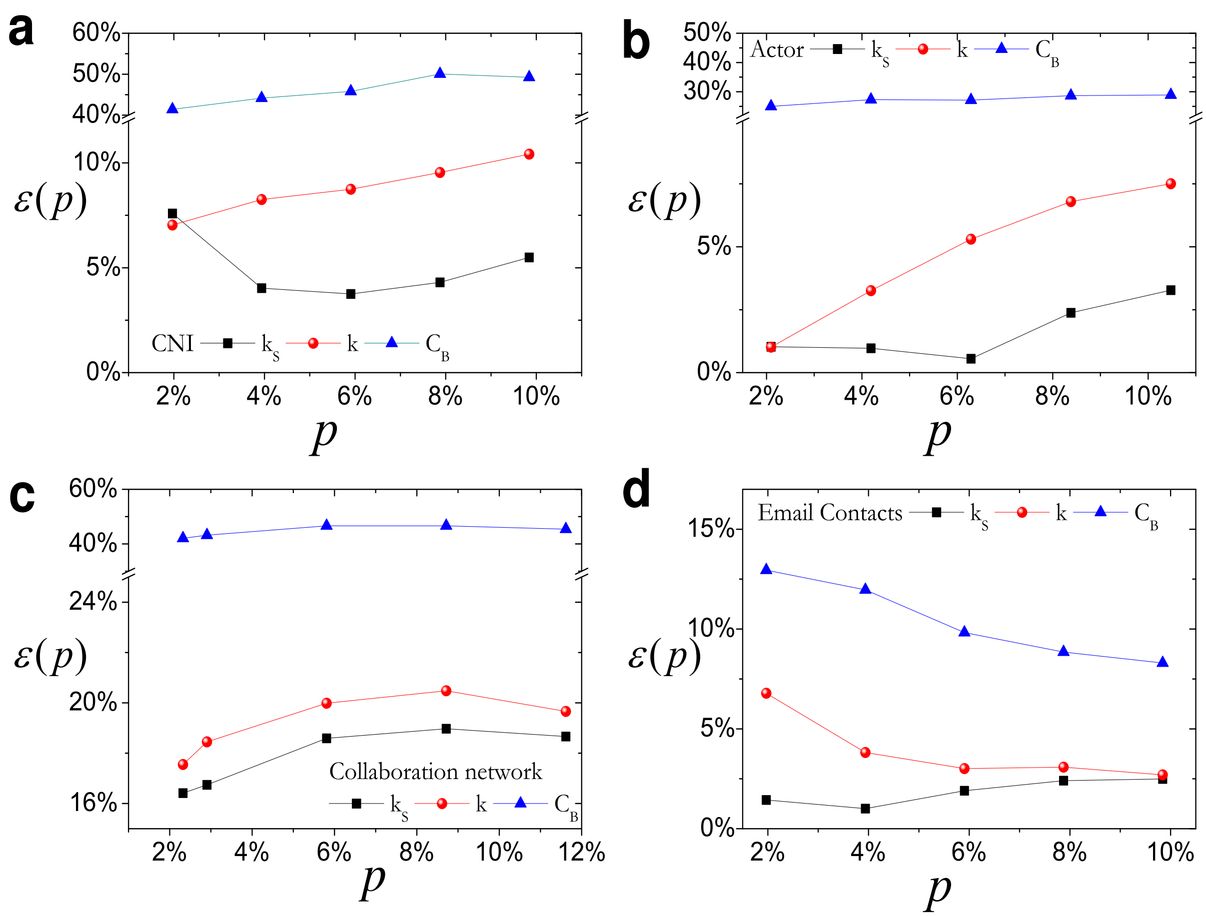

FIG. 8: **The imprecision functions $\epsilon(p)$ test the merit of using k-shell, k and C_B to identify the most efficient spreaders in the CNI, actor, collaboration, and email contact networks.** The k-shell based identification method yields consistently lower imprecision compared to the k and C_B based methods.

the number of nodes that we consider in the comparison. By definition, $M_{eff}(p) \geq M_{k_S}(p)$, and the equality is only reached if $\Upsilon_{eff}(p) = \Upsilon_{k_S}(p)$. We assess the imprecision of k-shell identification by calculating the ratio between $M_{eff}(p)$ and $M_{k_S}(p)$:

$$\epsilon_{k_S}(p) \equiv 1 - \frac{M_{k_S}(p)}{M_{eff}(p)}. \tag{4}$$

Similarly, we can define $\epsilon_k(p)$ and $\epsilon_{C_B}(p)$:

$$\epsilon_k(p) \equiv 1 - \frac{M_k(p)}{M_{eff}(p)}\,, \; \epsilon_{C_B}(p) \equiv 1 - \frac{M_{C_B}(p)}{M_{eff}(p)}. \tag{5}$$

A value for ϵ close to 0 denotes a very efficient process, since the nodes that are chosen are practically those that contribute most to epidemics. In all cases, the k_S method yields a