Properties for Set-Similarity

- Let S be set of concepts, we want a measure $\rho(S_i, S_j)$ to access the semantic similarity of two sets

(i) $\rho(S_i, S_j) = \rho(S_j, S_i)$ for all S_i, S_j,

(ii) $\rho(S_i, S_j) \leq \rho(S_i \cup c_k, S_j \cup c_k)$ where $\forall c_l \in S_i, \cup S_j, c_l \propto c_k$ for all S_i, S_j,

(iii) $\rho(S_i, S_j) \leq \rho(S_i, S_j \cup S_k)$ for all S_i, S_j, S_k,

(iv) $\rho(S_i, S_j) \leq \rho(S_j, S_j)$ for all S_i, S_j.