Jaccard approach:

$$\hat{\sigma}(r_i, r'_j) = \frac{|V_i \cap V'_j|}{|V_i \cup V'_j|}$$

Intersection over product(IOP):

$$\hat{\sigma}(r_i, r'_j) = \frac{|V_i \cap V'_j|}{|V_i| * |V'_j|}$$

Degree product of incident nodes (DPIN):

$$\hat{\sigma}(r_i, r'_j) = \sum_{k=0}^{|S_v|} I_{ik}^T * S_{kk} * I'_{kj}$$

Normalized Degree product of incident nodes (NDPIN):

$$\hat{\sigma}(r_i, r'_j) = \sum_{k=0}^{|S_v|} \frac{I_{ik}^T}{D_k} * S_{kk} * \frac{I'_{kj}}{D'_k}$$

PARIS:

$$Pr(r_i \subseteq r'_j) = \frac{|(x,y) : r(x,y) \wedge r'(x,y)|}{|(x,y) : r(x,y)|}$$

Dataset	Jaccard appraoch	IOP (2nd approach)	DPIN	NDPIN	NDPIN (Without replicas)	PARIS Super-relation 1	PARIS Super-relation 2	PARIS Product of SR1 & SR2
Memory_alpha vs Memory_beta	0.890000	0.890000	0.880000	0.960000	0.940000	0.830000	0.900000	0.840000
Memory_alpha vs ST_expanded	0.870000	0.850000	0.770000	0.890000	0.910000	0.670000	0.760000	0.690000
Starwars vs Starwars_TOR	0.880000	0.850000	0.830000	0.910000	0.940000	0.660000	0.820000	0.670000
Starwars vs Starwars_galaxies	0.830000	0.830000	0.670000	0.660000	0.620000	0.500000	0.530000	0.530000