

Symbol	Definition
$G = (V, E)$	social graph with $N = V $ and $M = E_G $
$A(G)$	adjacency matrix of G
D	degree sequence of G (column vector)
$Diam(G)$	diameter of G
$N(u)$	neighbors of node u in G , $d_u = N(u) $
T	number of exchange rounds
(v, w)	true link between v and w
$(v \rightarrow w)$	fake link generated by v
$L_u(t)$	set of links possessed by u at round t
$L_{uv}(t)$	set of links u sends to v at time t
\propto	uniformly at random sampling without replacement
α	fraction of links shared between a pair of nodes
β	fraction of fake links generated at $t = 0$
m	number of bits in Bloom filter
k	number of hash functions used in Bloom filter
n	number of elements in Bloom filter
$Bf_u(t)$	Bloom filter possessed by u at round t
$Bf_{uv}(t)$	Bloom filter u sends to v at time t