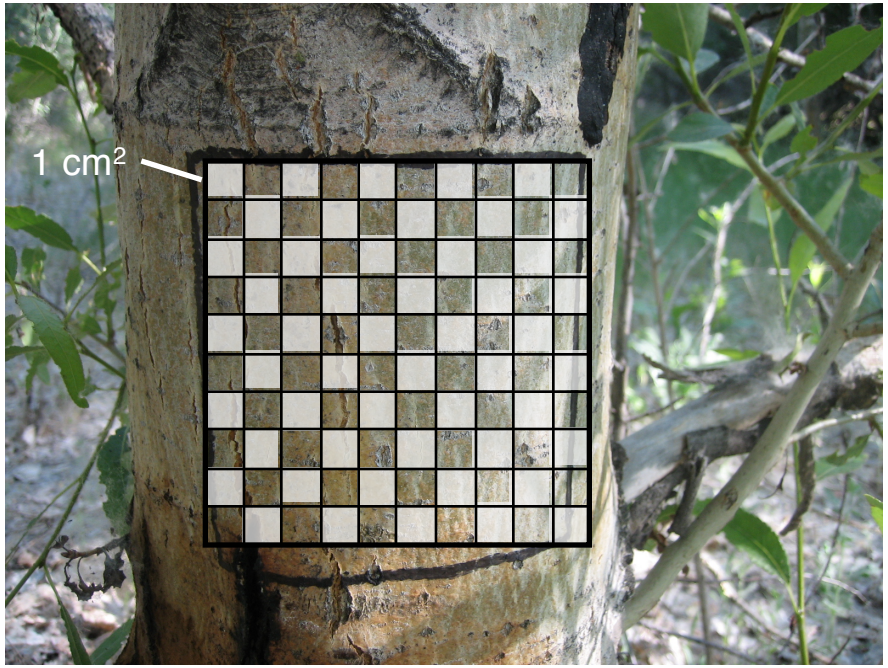
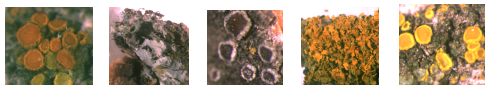
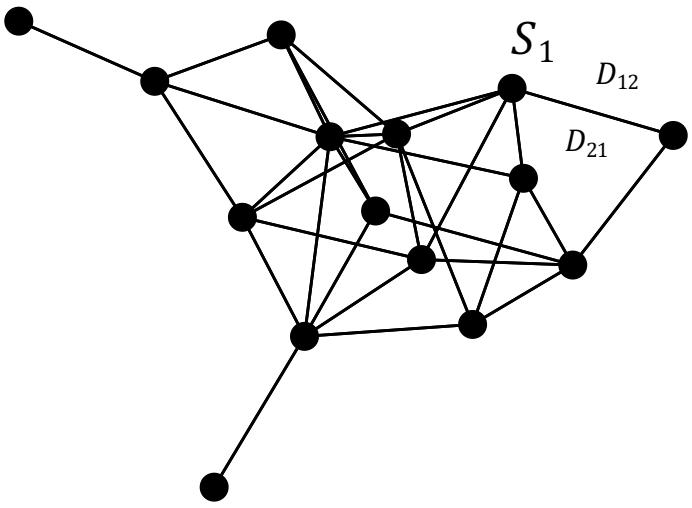




S_1 S_2 S_3 S_4 S_5 …

0	0	1	1	1	
1	0	1	0	1	
1	1	1	0	0	N
0	0	0	0	0	
…	…	…	…	…	



$$P(S_i) = \frac{1}{N} \cdot \sum(S_i)$$

$$E[P(S_i, S_j)] = P(S_i) \cdot P(S_j)$$

$$\mathrm{Var}(\mathrm{E}[S_i S_j]) = N \cdot E[P(S_i, S_j)] \cdot (1 - E[P(S_i, S_j)])$$

$$CI_{95\%} = N \cdot P(S_i, S_j) \pm Z_{95\%} \cdot \sqrt{\mathrm{Var}(\mathrm{E}[S_i S_j])}$$

$$P(S_i|S_j) = \frac{P(S_i,S_j)}{P(S_j)} \text{ if } CI_L \geq S_i S_j \text{ or } S_i S_j \leq CI_U$$

$$= \frac{P(S_i)P(S_j)}{P(S_j)} = P(S_i) \text{ if } CI_L \leq S_i S_j \leq CI_U$$

$$D_{ij} = P(S_i|S_j) - P(S_i)$$