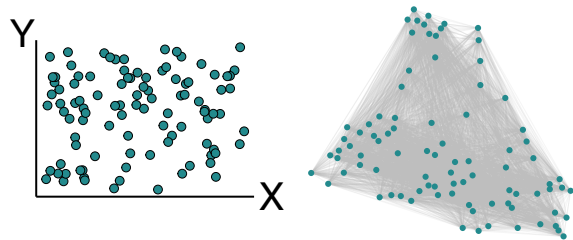
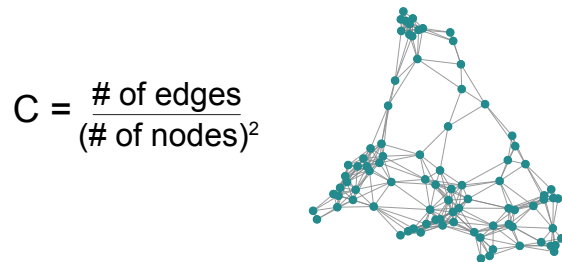


## A. Simulating spatial networks

1. Simulate spatial coordinates and calculate pairwise distance



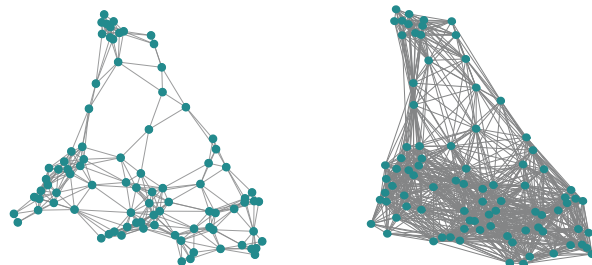
2. Prune the lowest weight edges until connectance ( $C$ ) is 10%.



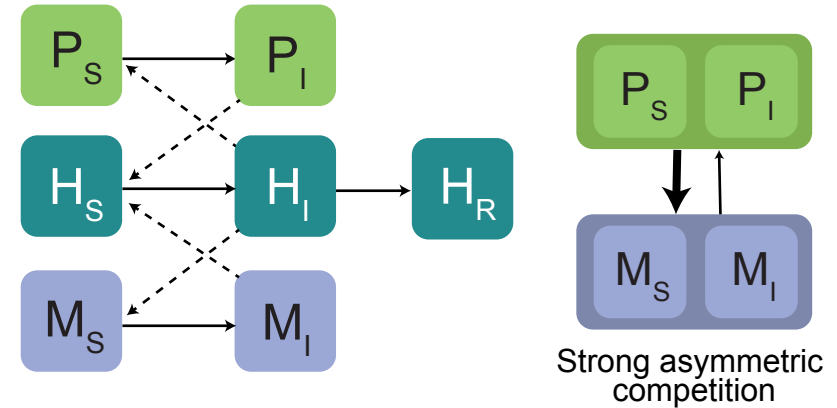
3. Recalculate pairwise distance; sequentially add edges for desired connectance.

$C = 10\%$

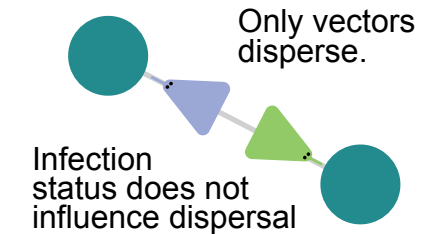
$C = 15\%$



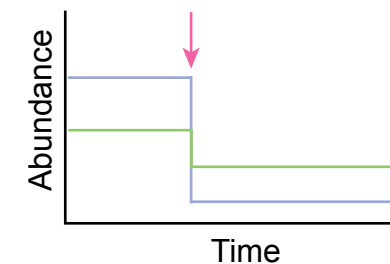
## B. Disease dynamics within a patch



## C. Dispersal between patch



## D. Disturbance in selected patches



Disturbance inflicts higher mortality on primary vectors

