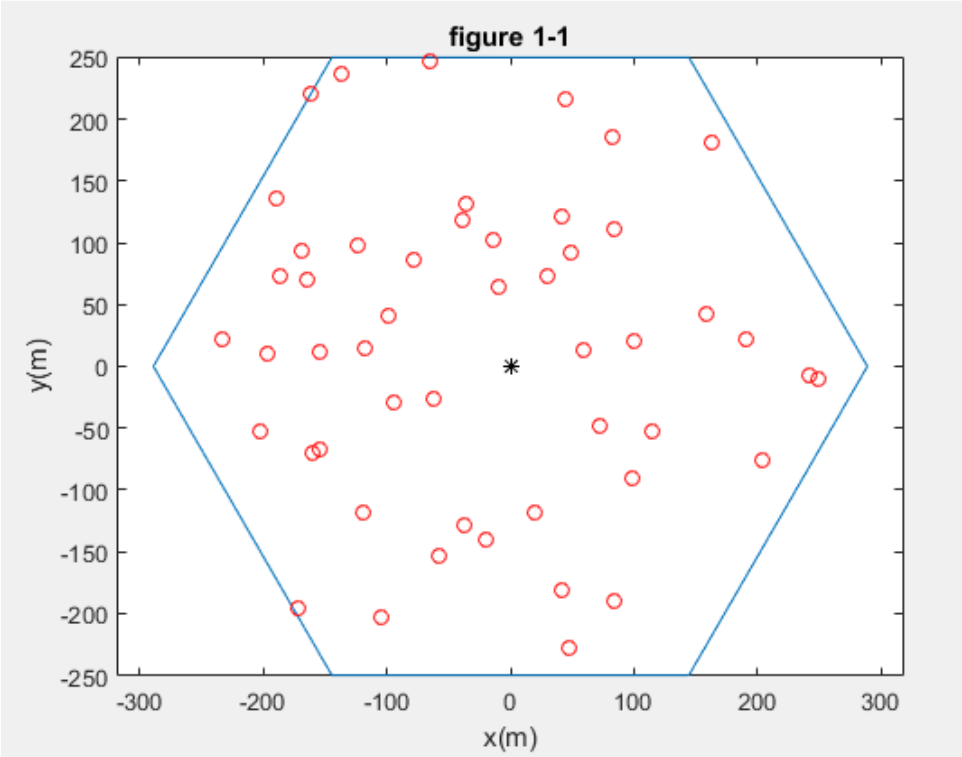
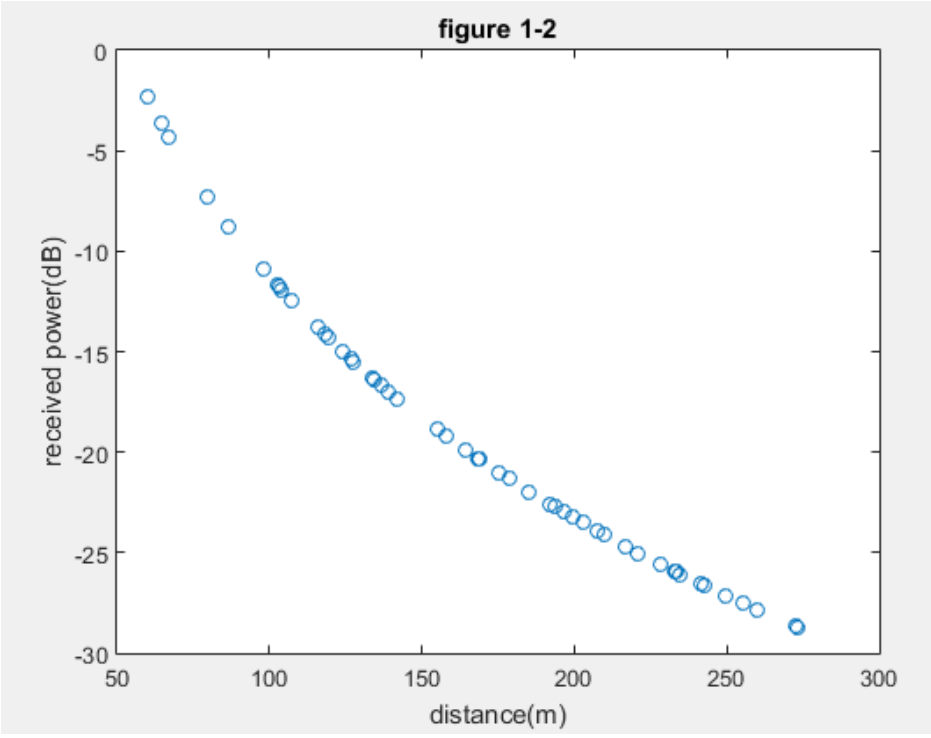
B03901161 電機三 楊耀程

1-1



The center of the cell, which is marked as “*”, is the base station, the other red “o”s are mobile stations(there are 50 MS in a cell)

1-2

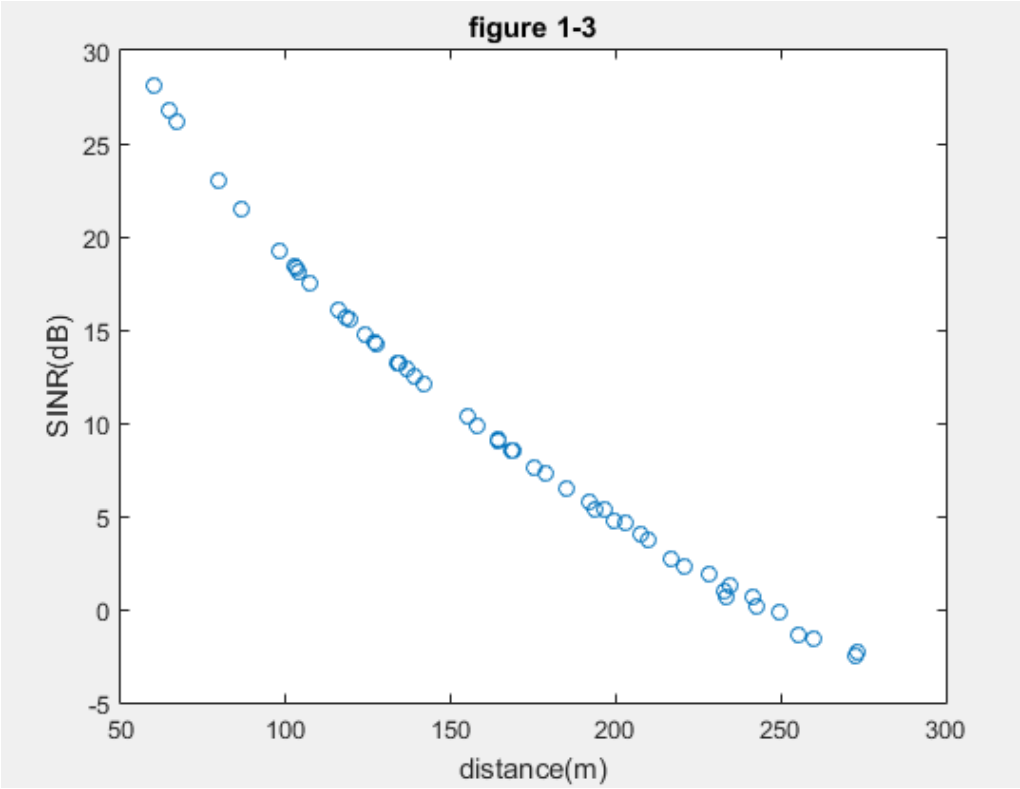


To calculate the received power (PR):

1. Calculate the path loss g(distance) = (ht2 * hr2) /distance^4.
2. Then we get the received power PR = PT * GT * GR * g(distance)

distance is the distance between ith MS and central BS(there are 50 MS in a cell)

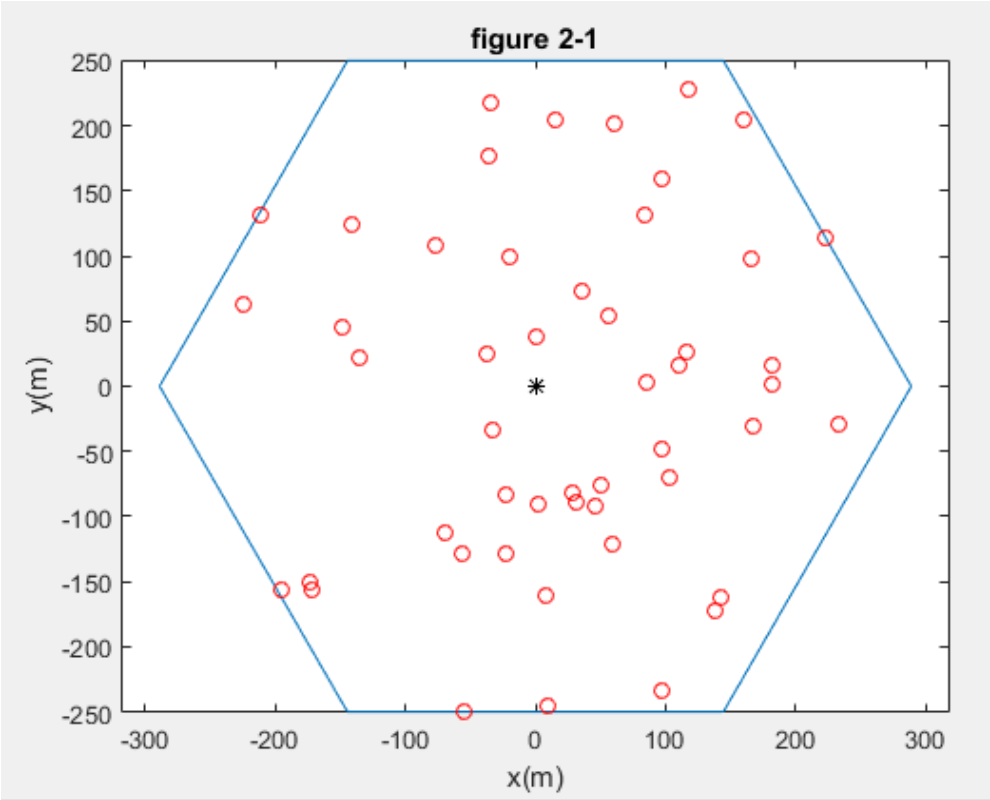
1-3



To calculate the SINR:

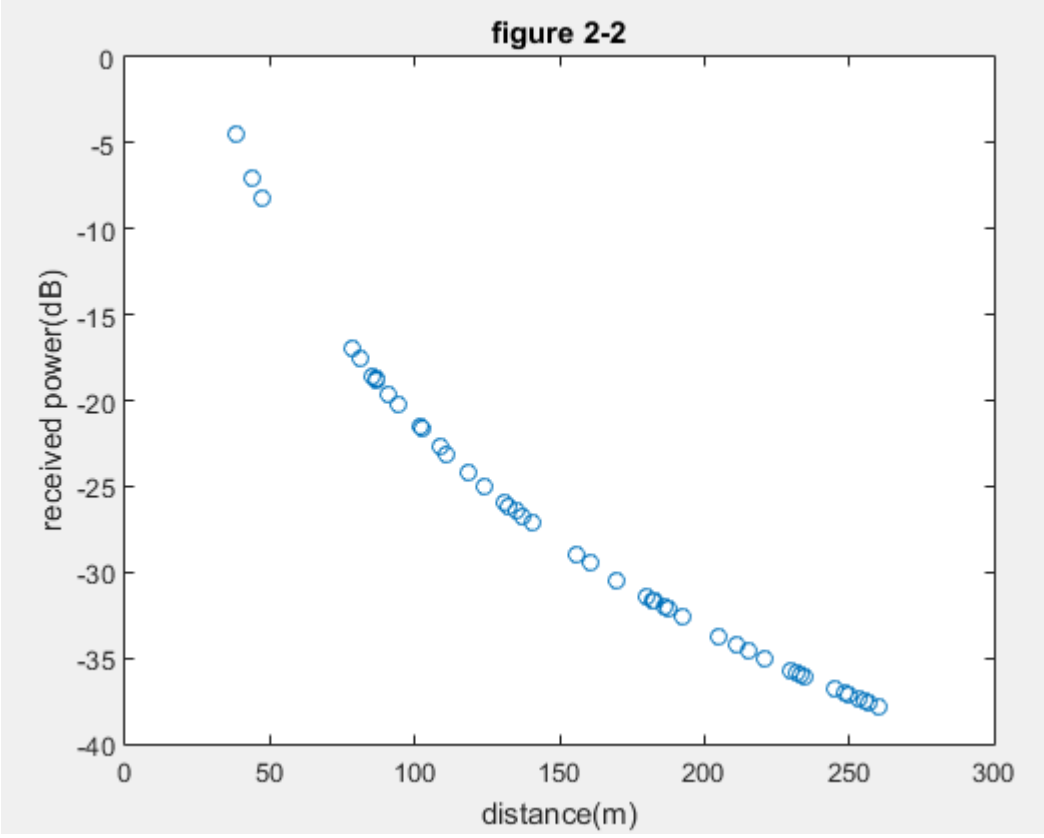
1. Calculate interference by summing the received power at a mobile device from each BS except for the central BS.
2. Then calculate the power of thermal noise by N = k * T * B.
3. Finally, we get SINR = PR / (interference + N)

2-1



The center of the cell, which is marked as “*”, is the base station, the other red “o”s are mobile stations(there are 50 MS in a cell)

2-2

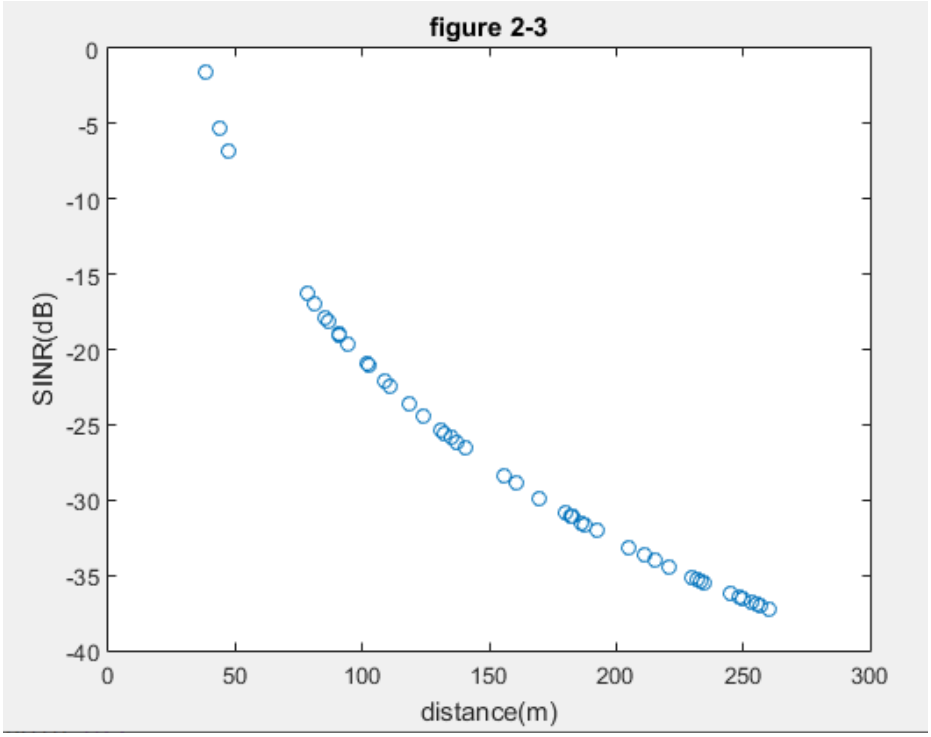


To calculate the received power (PR):

1. Calculate the path loss g(distance) = (ht2 * hr2) /distance^4.
2. Then we get the received power PR = PT * GT * GR * g(distance)

distance is the distance between ith MS and central BS(there are 50 MS in a cell)

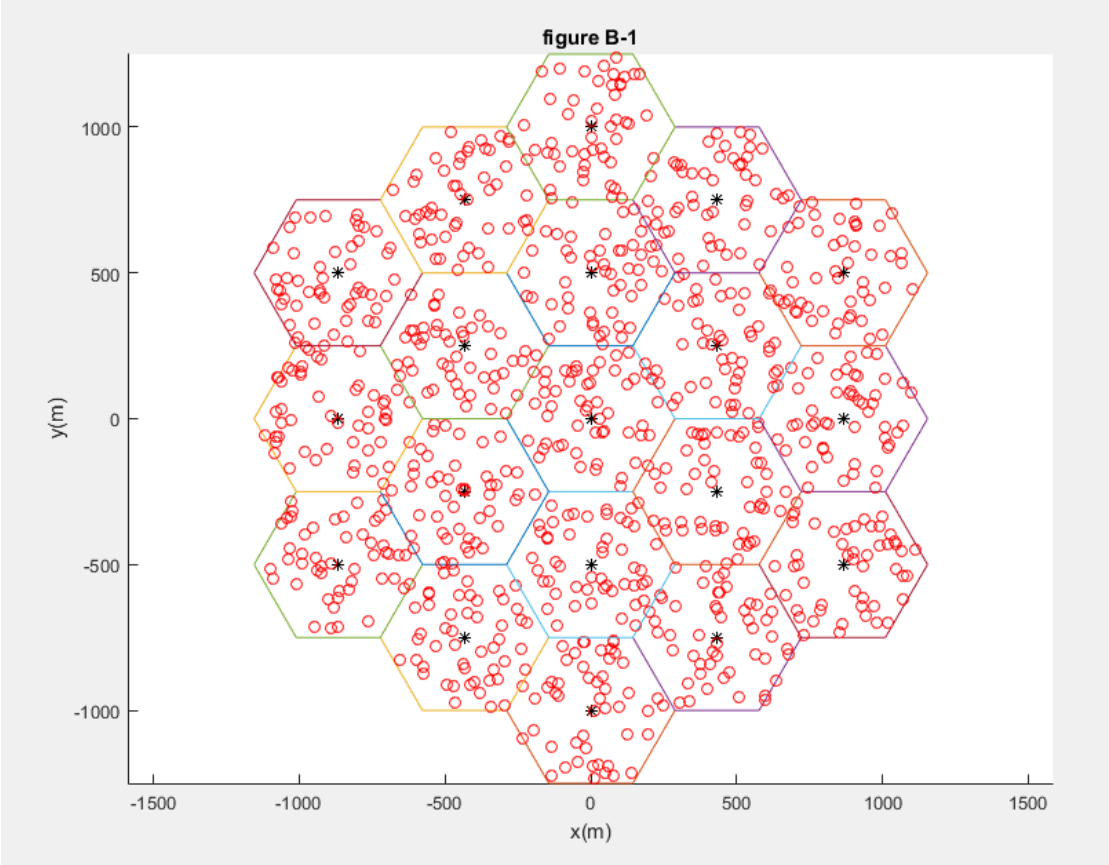
2-3



To calculate the SINR:

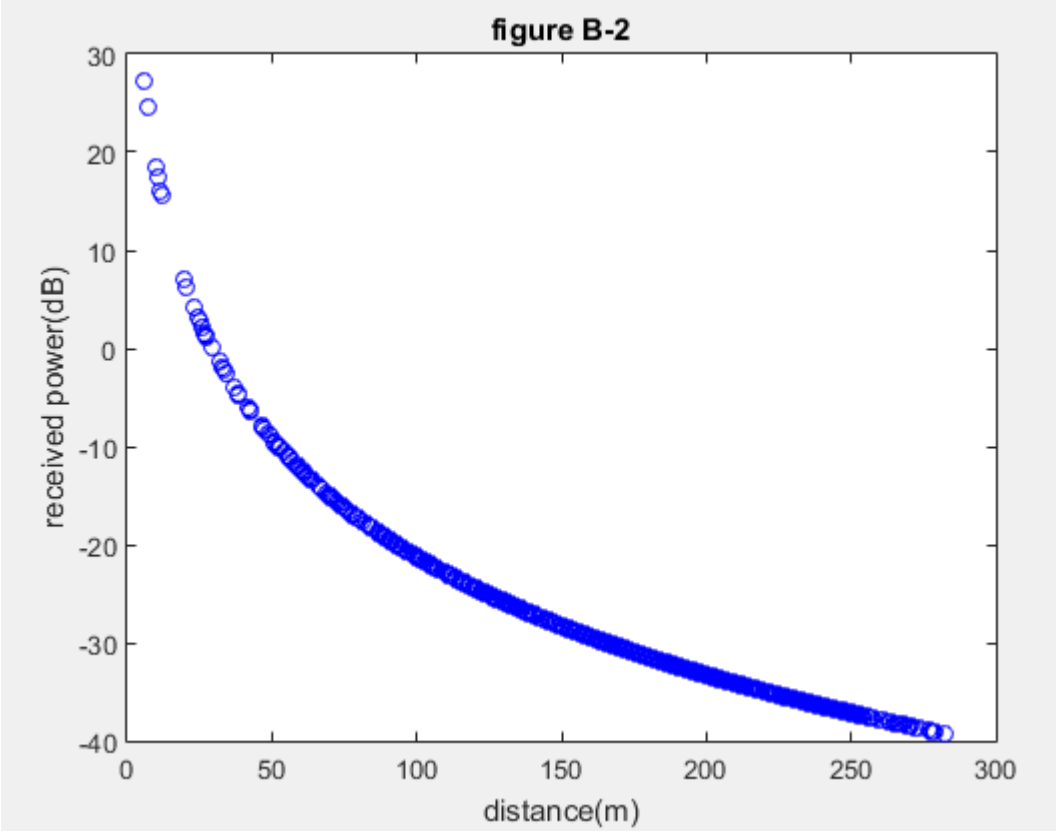
1. Calculate interference by summing the received power at central BS from other MS in central cell (except for the selected MS itself). There are 50 MS in a cell.
2. Then calculate the power of thermal noise by N = k * T * B.
3. Finally, we get SINR = PR / (interference + N)

B-1



The center of the cell, which is marked as “*”, is the base station, and the other red “o”s are mobile stations(there are 50 MS in a cell). The hexagons represent cells.

B-2

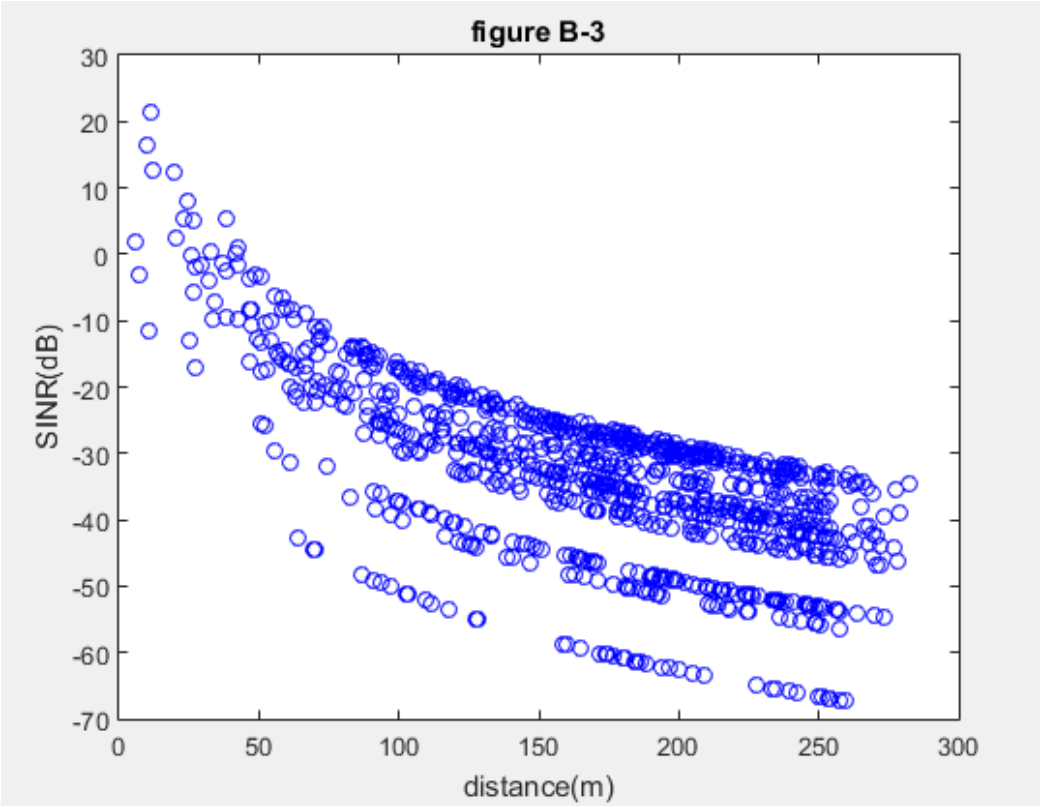


To calculate the received power (PR):

1. Calculate the path loss g(distance) = (ht2 * hr2) /distance^4.
2. Then we get the received power PR = PT * GT * GR * g(distance)

distance is the distance between ith MS and jth BS, where ith MS is in the cell of jth BS.

B-3



To calculate the SINR:

1. Calculate interference by summing the received power at BS from other MS (except for the selected MS itself). There are 19*50 MS in these 19 cells.
2. Then calculate the power of thermal noise by N = k * T * B.
3. Finally, we get SINR = PR / (interference + N)