

# Interference investigation in dense wireless networks

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## PROJECT PROPOSAL

In summary, the primary objectives of the paper are:

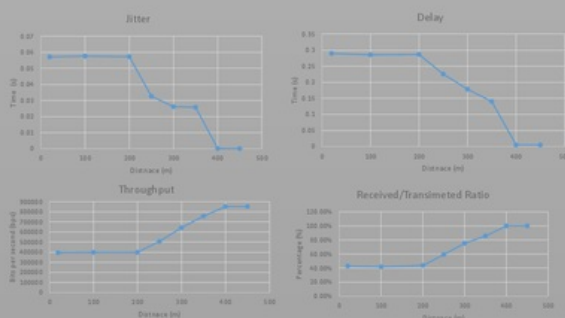
- Identify factors that affect interference
- Investigate the interference when multiple access points are densely placed.
- Develop different scenarios for investigating wireless interference in simulated environments (Omnet++, NS3).
- Propose an algorithm that will try to reduce interference in dense wireless networks.
- Draw some conclusions about wireless interference and provide suggestions for future work.



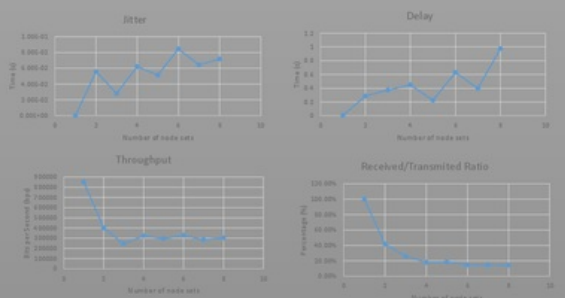
## Network Topology Example

## OMNET++ RESULTS

### SCENARIO 1: Increasing Distance

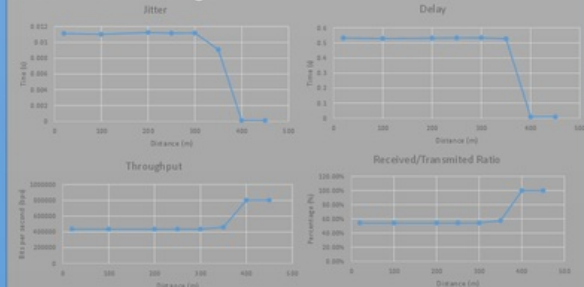


### SCENARIO 2: Increasing number of node sets

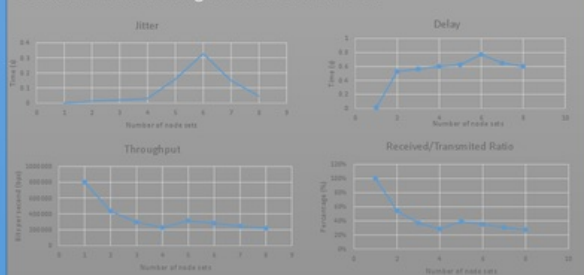


## NS3 RESULTS

### SCENARIO 1: Increasing Distance

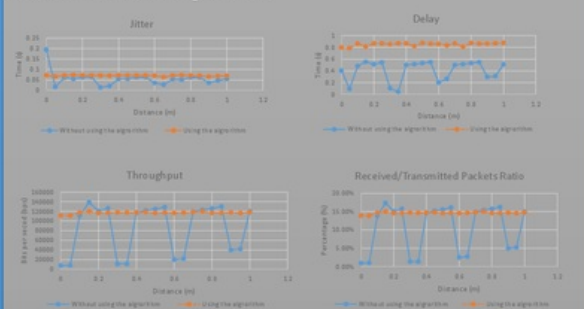


### SCENARIO 2: Increasing number of node sets

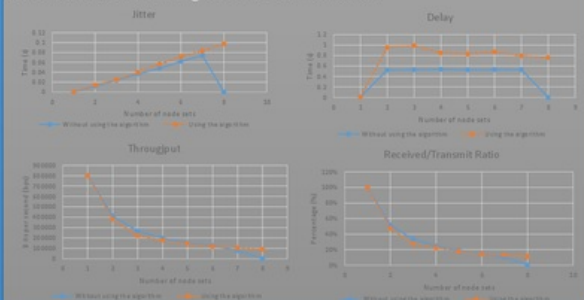


## ALGORITHM VS NORMAL BEHAVIOUR

### SCENARIO 1: Increasing Distance



### SCENARIO 2: Increasing number of node sets



## CONCLUSIONS

- As distance between node sets increases, network's overall performance is also increased.
- As density between the nodes increases, network's overall performance is reduced.
- With the use of algorithm, there are higher delays and jitter in the network.
- Algorithm's performance is better than normal behaviour only in high interference situations (short distances and/or high density between the nodes).