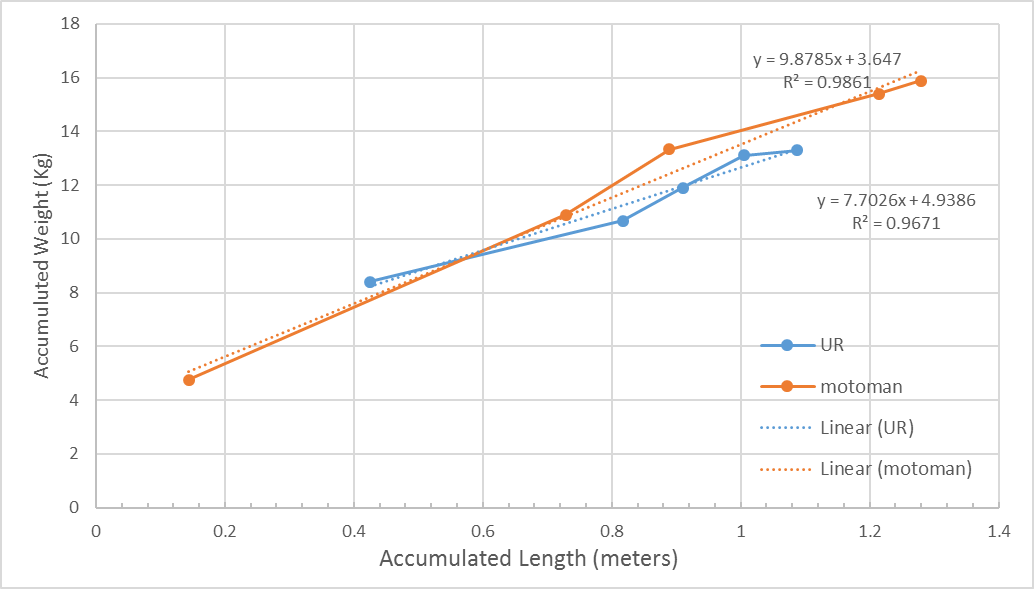
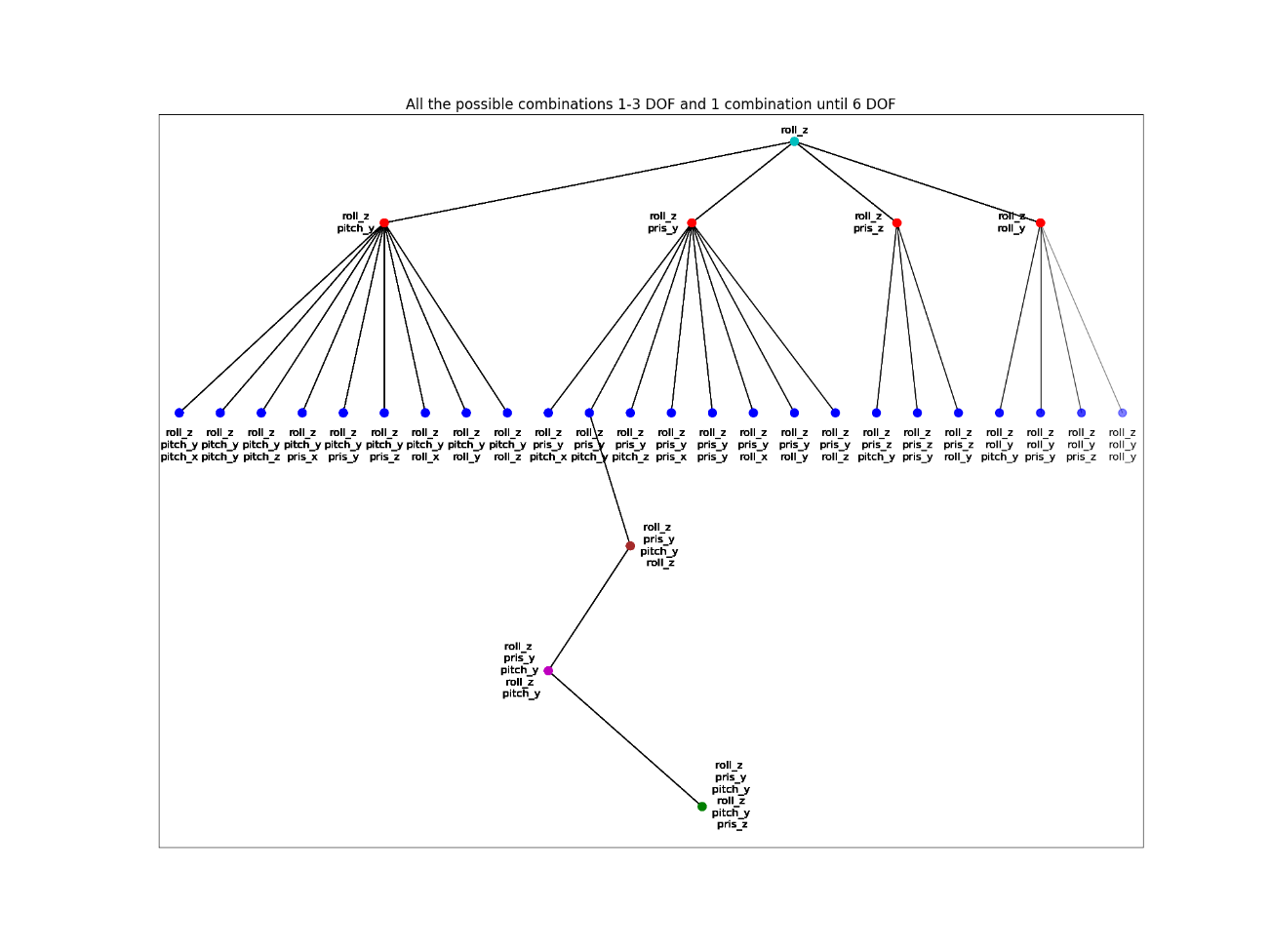
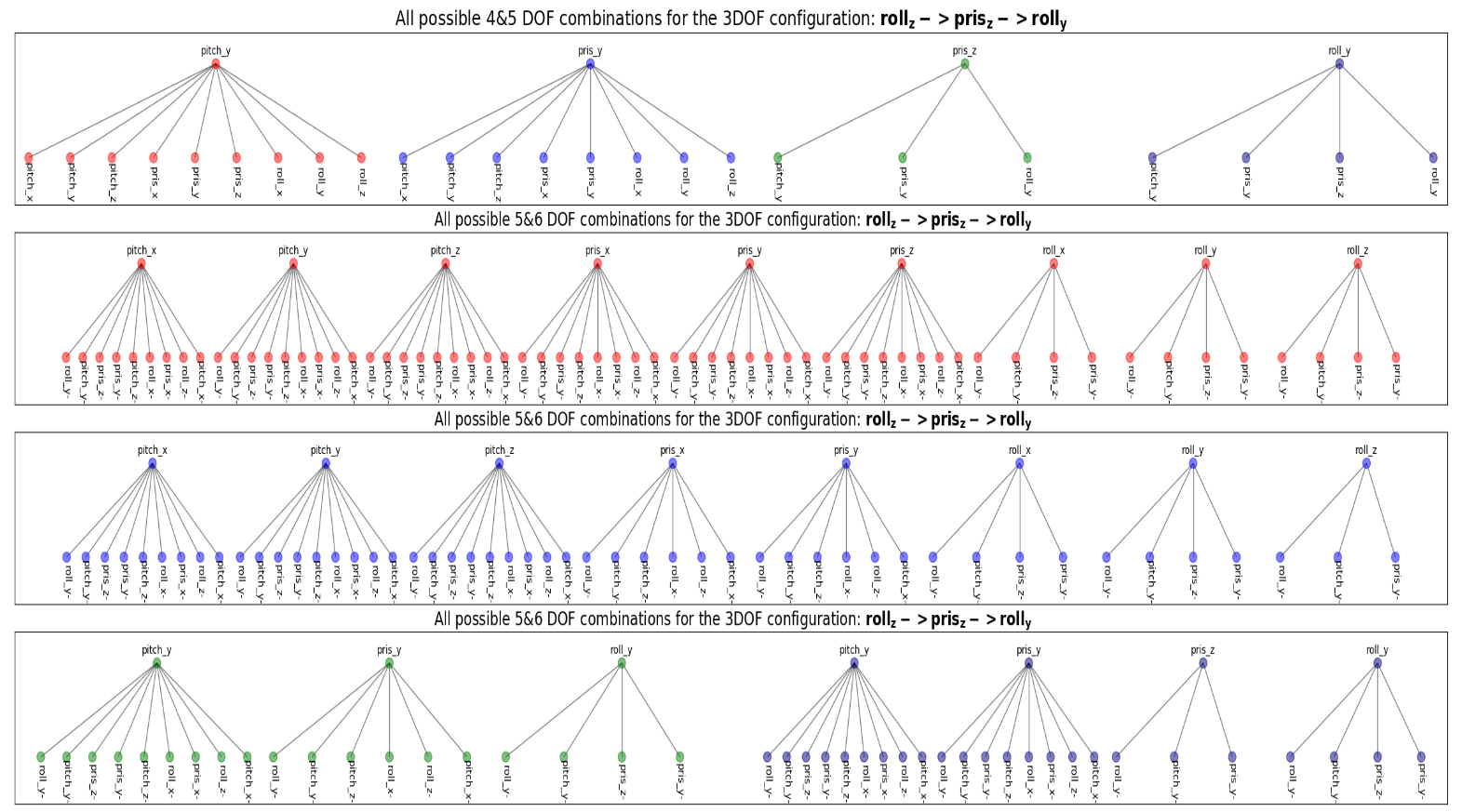
# weight



# possible configurations

In figure \*\*\*\* it can be seen all the possible configurations of joints (without links length) of 3 DOF and one example to 4-6 DOF configuration.





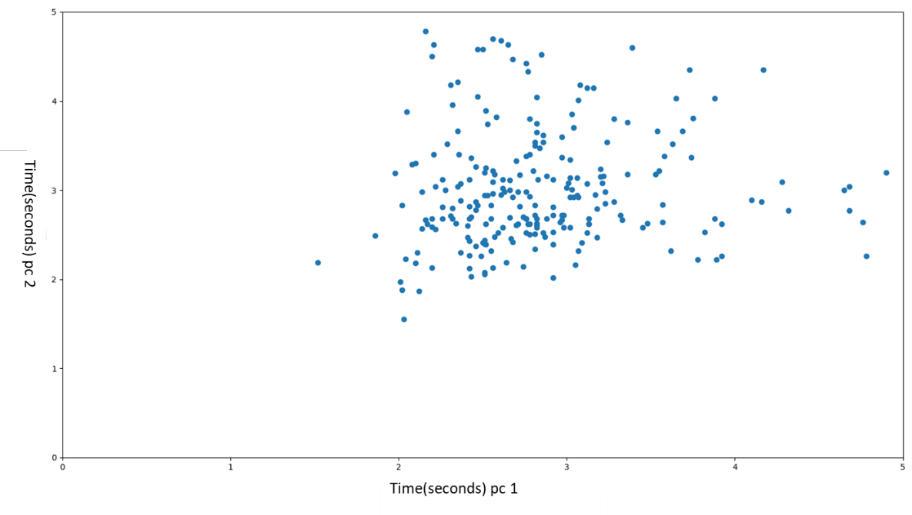
# Indices

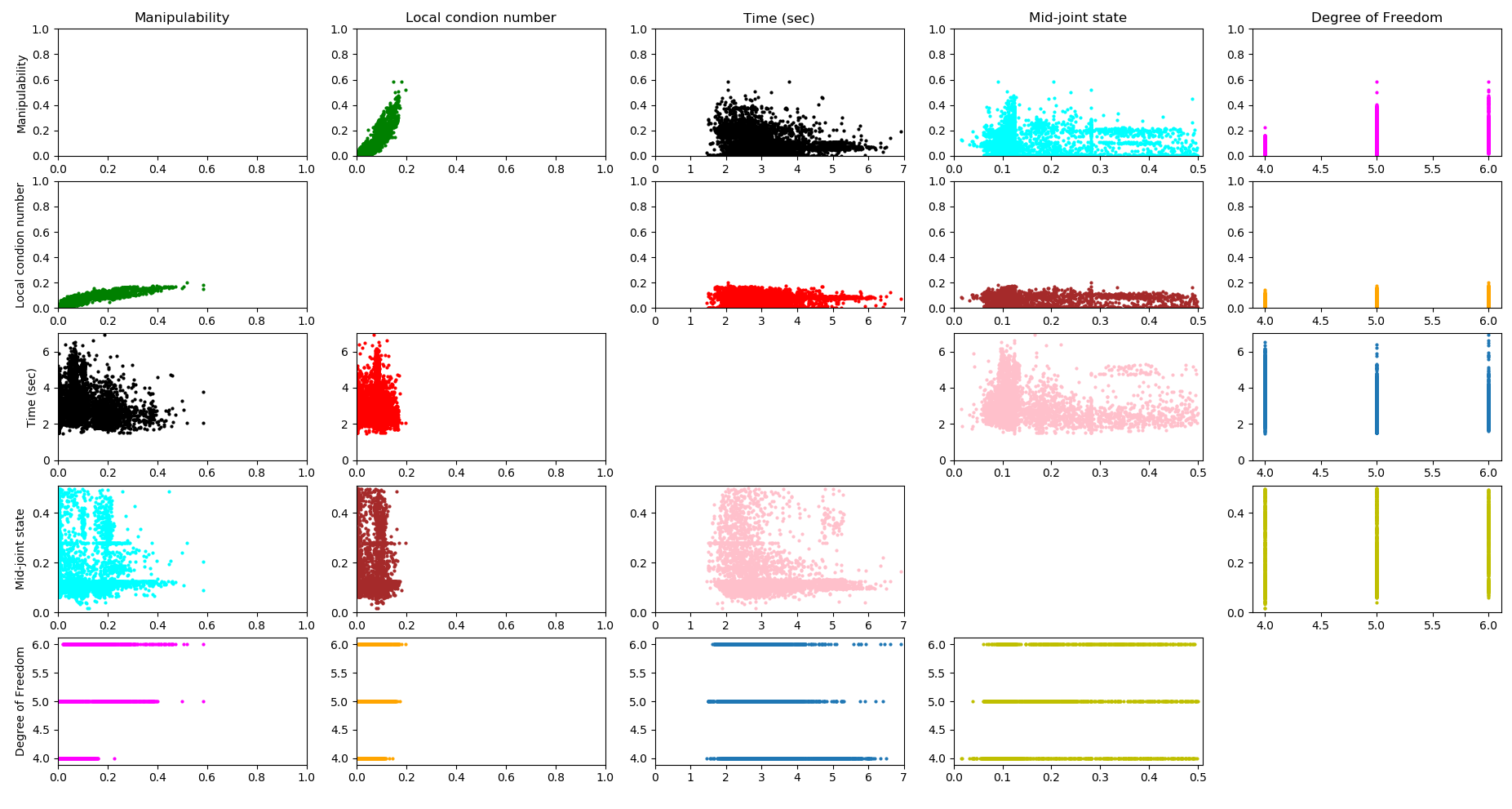
For choosing the indices to be used a preliminary simulation conducted over random 127000 configurations, all 3&4 DOF and part of 5&6 DOF.

From the preliminary simulation, none of the 3 DOF configurations succeeded to reach to desired points, therefore 3 DOF will not check further.

From Figure \*\*\*\* it can be seen that there is a correlation between the Manipulability index and Local Condition Number index, therefore Manipulability Index was selected to continue.

Another index that been checked is the time that takes to each configuration to find a possible path and to make movement in the simulator. Because the simulations have been done on 3 different computers there is a need to know if the type of computer affects the result and if the time is consisting. To test the time index about 500 configurations were simulated in 2 different computers in order to see if the time is consisting between the computers. In figure \*\*\* it can be seen that the time does not consist, therefore it wasn’t selected as an object.





# preliminary DWOI

