# Assignment 9

# Due at the end of two weeks (week ending 10th November)

1. Implement the basic Depth-First Search (DFS) algorithm. Adapt it to develop code for the following additional problems:

* Construct the Block-Cut-point tree associated with any input connected undirected graph.
* Perform topological sort of any input directed acyclic graph.
* Find the strongly connected components of any input directed graph.

1. Implement code to classify the edges of a positive weighted connected undirected graph into the following three disjoint categories:

* Those that lie in all minimum spanning trees
* Those that lie in no minimum spanning trees
* Those that are present in at least one minimum spanning tree and absent in at least one minimum spanning tree.

Note this is the same question as appeared in the second insemester examination. However, unlike the exam where the time limit was stringent, here I expect a complete working code and not just algorithmic ideas.