**Abstract**

Network is an approach of gathering simple elements to produce complex system. There are a large

number of different types of networks, but they all are characterized by the following components: a set of

nodes, and connections between nodes. The nodes can be seen as computational units. They receive inputs,

and process them to obtain an output. This processing might be very simple (such as summing the inputs), or

quite complex (a node might contain another network). The connections determine the information flow

between nodes. They can be unidirectional, when the information flows only in one sense, and bidirectional,

when the information flows in either sense. The interactions of nodes though the connections lead to a global

behavior of the network, which cannot be observed in the elements of the network. This means that the abilities

of the network supercede the ones of its elements, making networks a very powerful tool.