Operational research:
Theory and Applications to Networking
Assignment for ICT4SS people, only:
Green Networking problem

1) Consider the optimal design problem of a energy efficient network. Formulate the problem when the power dissipated by devices depends on the load. More precisely, the power dissipated by every device is the sum of two terms:
- a load independent term and
- a term which is linearly dependent on the device load.

2) Discuss the meaning of all the variables and parameters introduced in the formulation.

3) Solve the formulation, for different physical typologies, traffic matrices and the cost parameters.

- suggestion: you can choose either a regular topology (e.g. a grid) or a randomly generated topology. Choose the number of nodes in the range [16-24]. Traffic matrix can be randomly generated as well.