## Exercise No. 1 Peer-To-Peer Networks

## Winter 2015

Exercise 1 Name three Peer-to-Peer networks in the wild and give a detailed description.

**Exercise 2** Calculate the expectation, variance, second and third moment of a Pareto distribution where

- 1.  $\alpha = 1.5$ ,
- 2.  $\alpha = 2.5$ ,
- 3.  $\alpha = 3.5$ .

**Exercise 3** Give other examples of Pareto, Zipf, or power distributed natural or social phenomena. What is the exponent  $\alpha$ ? Compare it with those examples presented in the lecture and explain the differences.