## Introduction

Parallel computing has been developed to solve many computational problems. Platforms can represent multicore chips, cluster of servers, grids, clouds (they provide services, virtualized resources), fog (some services are precessed at the "edge" of cloud, smart devices). One question we can ask ourselves is: what to optimize? A few examples include:

- ▶ total computation time (most parallelism);
- ▷ cost of infrastructure;
- b total number of operations (parallelism overheard);
- ▶ to be able to solve larger problems;
- ▶ minimize energy/power (use renewable energy?).