Future computing systems

- **Current evolution of technology**
  - More transistors, multi-cores, heterogeneous systems, more parallelism
- **System complexity**
  - Understanding, analysis, evaluation
  - Programming issues

  (6h - Daniel Gracia)

- **Program optimizations**
  - Compilation and architecture specific optimizations
  - Polyhedral optimizations

  (6h - Anna Beletska)

- **Toward self-tuning adaptive systems**
  - Iterative feedback-directed compilation
  - Dynamic compilation and run-time adaptation
  - Machine learning (optimization knowledge reuse)

  (6h - Grigori Fursin)

- **Other potential future directions**
  - End of the "Moore law" (CMOS technology)
  - Reversible computing: energy and computation
  - New spatial parallel programming paradigm

  (6h – Christine Eisenbeis, Daniel Gracia, Frederic Gruau)