

## Unit 1. Introduction and overview of SoCs

The outline of this unit is as follows:

- Introduction and overview of SoCs: status of the semiconductor market and business, statement of Moore's law and current trends.
- Scaling problems: description of the issues when going towards deep-submicron CMOS processes and low-area and power solutions.
- State-of-the-art SoCs: examples of different applications of SoCs.
- CMOS main features: CMOS-based nodes are extensively used for SoCs, instead of BJT-based ones. A quick description of the strengths and weaknesses of these nodes is provided.