



The aim of the [Cadence® Academic Network](#) is to promote the proliferation of leading-edge technologies and methodologies at universities renowned for their engineering and design excellence. This knowledge network among selected universities, research institutes, industry advisors, and Cadence® was established in 2007 to facilitate the sharing of technology expertise in the areas of verification, design, and implementation of microelectronic systems.

The department of Fundamentals of Electronics of the Faculty of Electronics, Telecommunications and Information Technology Iasi has been using Cadence® tools since 2002 in several areas of education and research, supported by faculty's microelectronics, nanoelectronics and optoelectronics specialization track.

Currently, several courses applications benefit from Cadence® software:

- Technological fundamentals of microelectronics (Cadence® tools used for schematic capture, layout and physical verification – DRC, LVS, etc.)
- Analog VLSI design techniques (Cadence® tools used for schematic capture and circuit simulation of analog VLSI circuits design)
- Digital VLSI design techniques (Cadence® tools used for schematic capture and circuit simulation of VLSI memory circuits design)
- Advanced analog VLSI design techniques, a master-level continuation of bachelor-level Analog VLSI design techniques course
- RF VLSI design techniques, a master-level RF design course and project

Our research activity pertaining to VLSI IC design almost entirely relies on Cadence® software, including:

- schematic capture
- layout
- physical verification
- analog and mixed-signal simulation
- RTL synthesis
- logic equivalence checking
- functional verification
- design for test

Another important area where Cadence® tools are used is within an unprecedented project involving three major Romanian technical universities: "Gheorghe Asachi" Technical University of Iasi, Technical University of Cluj-Napoca and Politehnica University of Bucharest, aiming at bridging the gap between academia and industry in analog/digital VLSI design. Teams from

these universities have successfully implemented a chip in AMS's 0.18um HV process. Professors and students have equally been involved in the process of circuit design and layout, PCB design for testing and measurements

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The project is encouraged and supported by members of the Romanian IC industry and it hopefully will move onto the design of a second chip.

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