POLITECNICO
MILANO 1863

DIPARTIMENTO DI ELETTRONICA
INFORMAZIONE E BIOINGEGNERIA

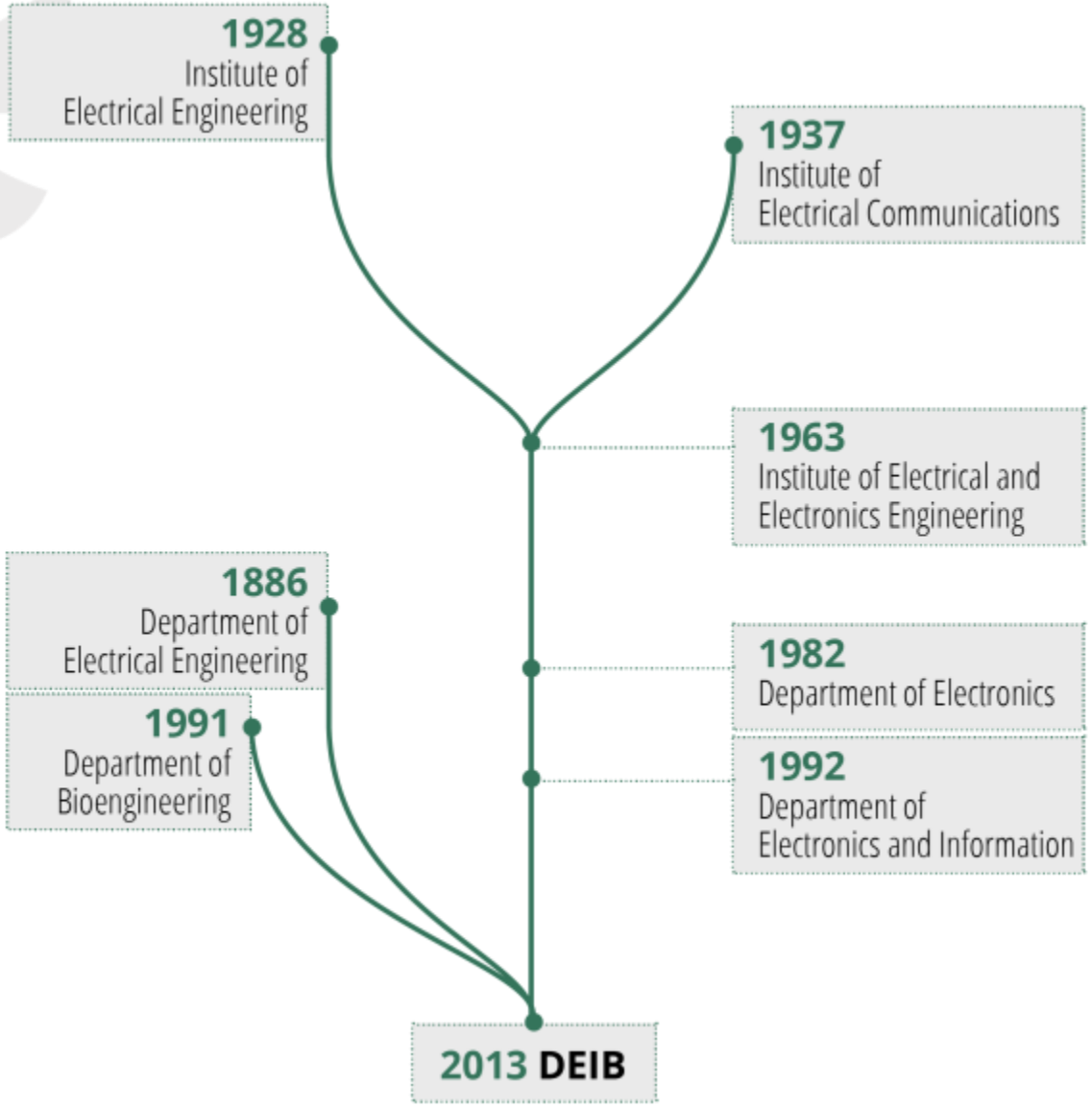
The Dipartimento di Elettronica, Informazione e Bioingegneria

An international hub of research and innovation in ICT

LETIZIA TANCA
Chair of the Computer Science and Engineering Area

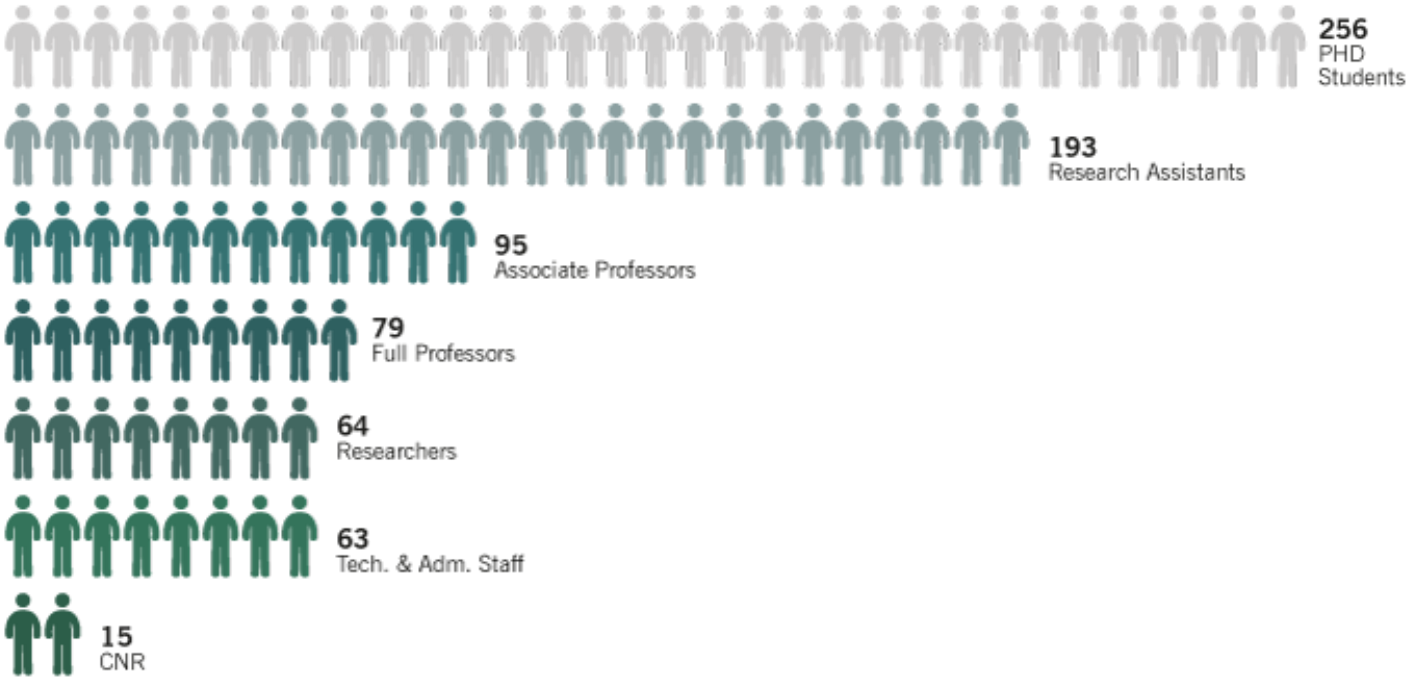
Department Chair: Prof. Gianantonio Magnani,
Deputy Chair: Prof. Roberto Ottoboni

HISTORY

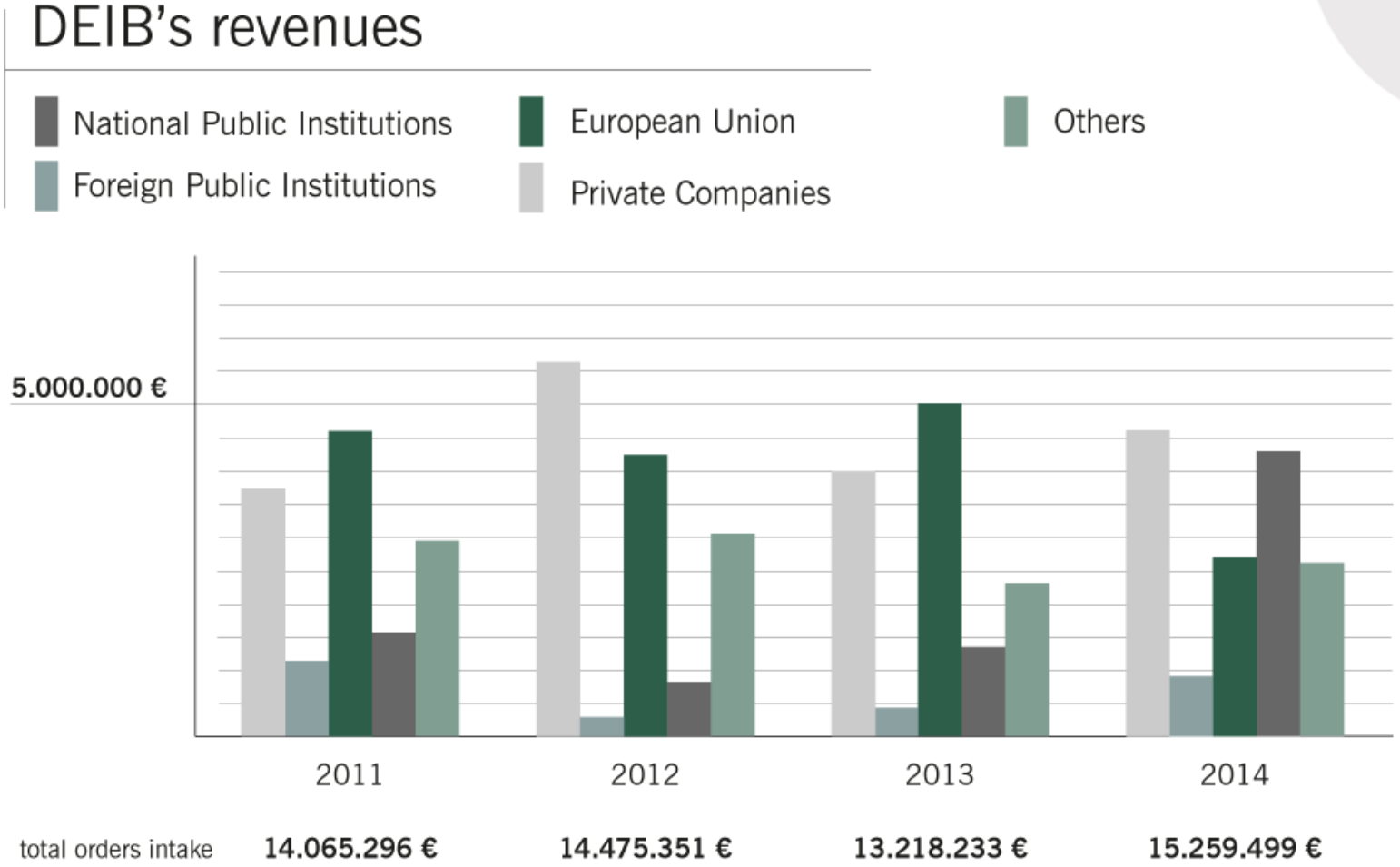

1928
Institute of
Electrical Engineering
1937
Institute of
Electrical Communications
1963
Institute of Electrical and
Electronics Engineering
1886
Department of
Electrical Engineering
1982
Department of Electronics
1991
Department of
Bioengineering
1992
Department of
Electronics and Information
2013 DEIB

PEOPLE

More than **750** people plus a number of external collaborators.



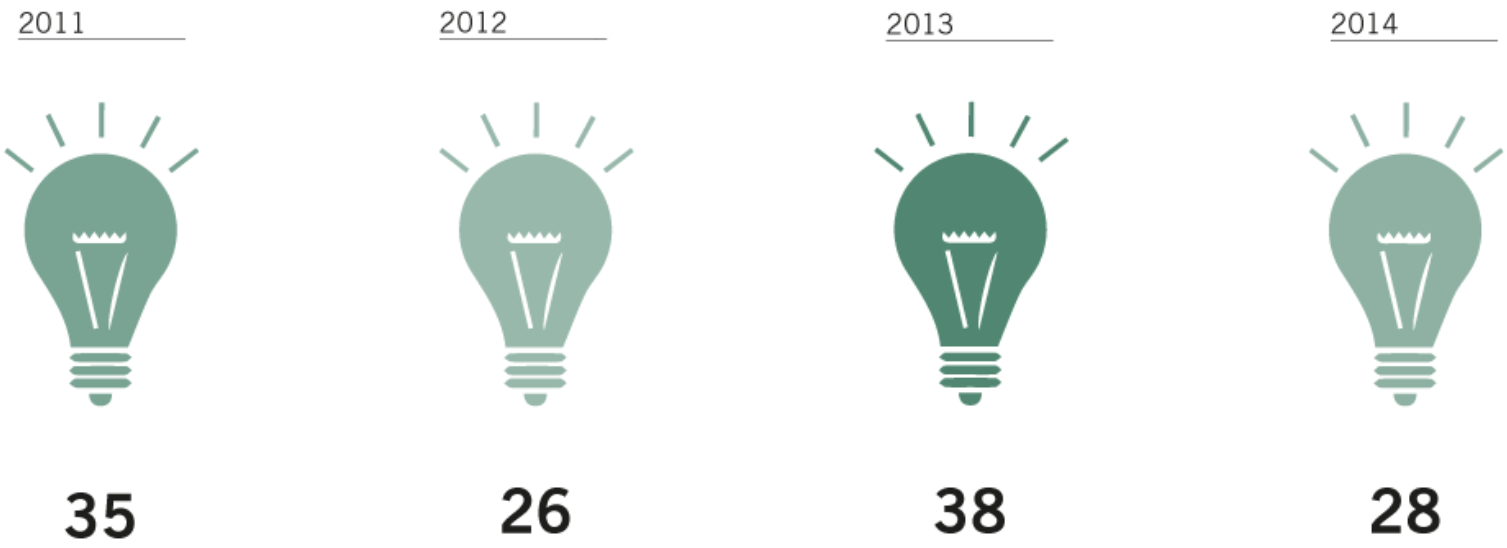
RESEARCH ACTIVITIES IN FIGURES



	2011	2012	2013	2014
total orders intake	14.065.296 €	14.475.351 €	13.218.233 €	15.259.499 €

RESEARCH ACTIVITIES IN FIGURES

DEIB Filed patents



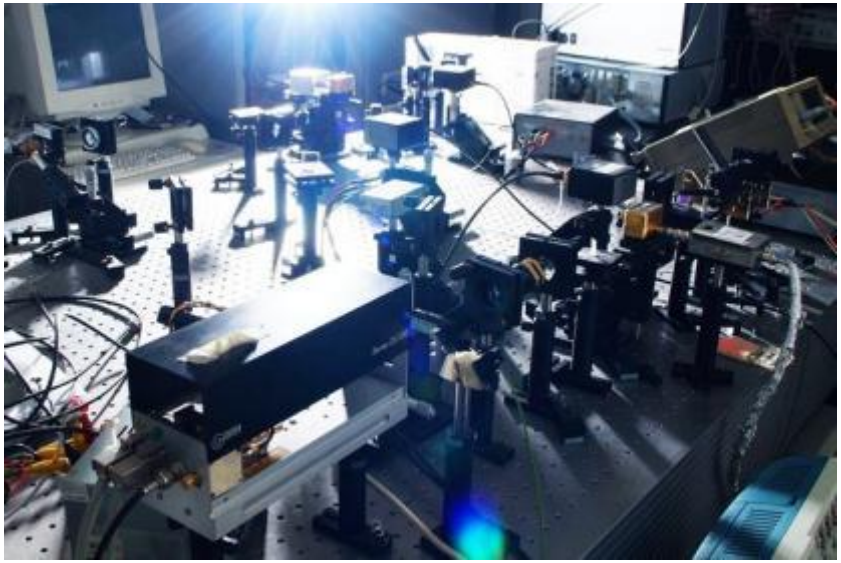
DEIB IN THE ICT SYSTEM OF THE POLITECNICO

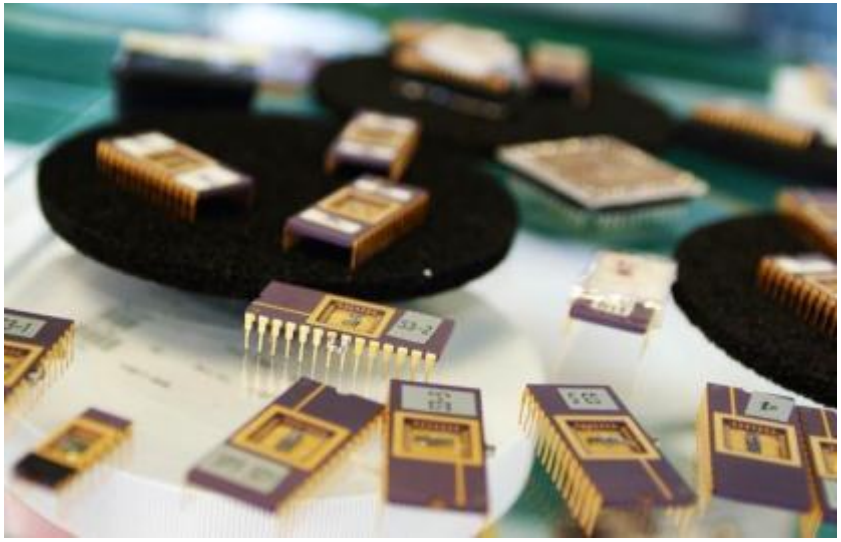
Basic Research | Applied Research | TT & Innovation | Commercialisation

DEIB	CEFRIEL	SPINOFF
753 employees and collaborators	120 employees and collaborators	10 companies
15 M € revenues	~ 9 M € revenues	109 employees and collaborators
		11,6 M € revenues

Overall the ICT field counts about 980 employees generating more than 35 M € revenue

LABORATORIES





7 Bioengineering Labs

14 Computer Science and Engineering, System and Control Labs

4 Electrical Engineering Labs

6 Electronics Labs

10 Telecommunications Labs

TEACHING ACTIVITIES

DEIB school members hold ICT courses
for 5 to 6 Schools of the Politecnico di Milano.

Every year the DEIB offers

467 courses, 3099 CFU:

240 courses for the Bachelor degree	**255 courses** for the Master degree	**1 course** for the 5-year degree

SYSTEM AND CONTROL BRANCH

CURRENT RESEARCH LINES

- Control systems
- Dynamics of complex systems
- Operations research and discrete optimization
- Optical measurements and laser instrumentation
- Planning and management of environmental systems
- Robotics and industrial automation

BIOENGINEERING BRANCH

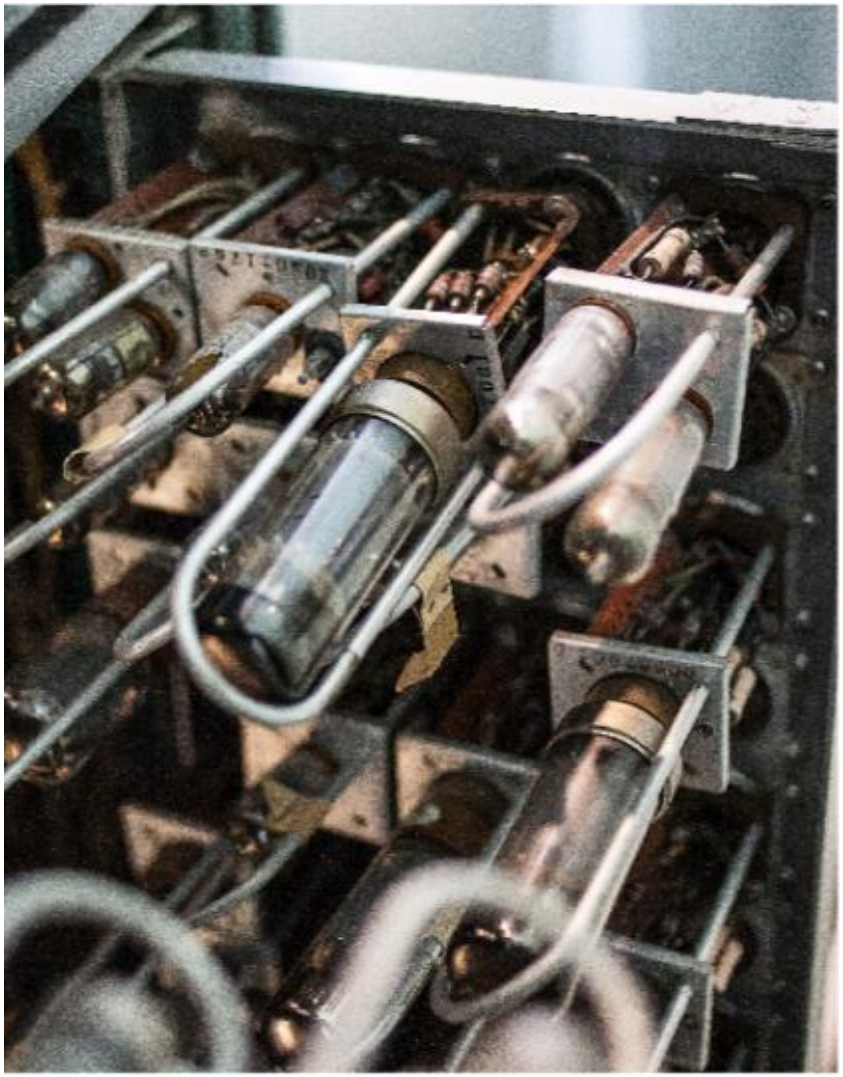
CURRENT RESEARCH LINES

- Biomimetics and micro-nano-technologies
- Physiological modeling, diagnostics, health systems and e-health
- Technologies for functional evaluation and rehabilitation
- Technologies for therapy

ELECTRICAL ENGINEERING BRANCH

CURRENT RESEARCH LINES

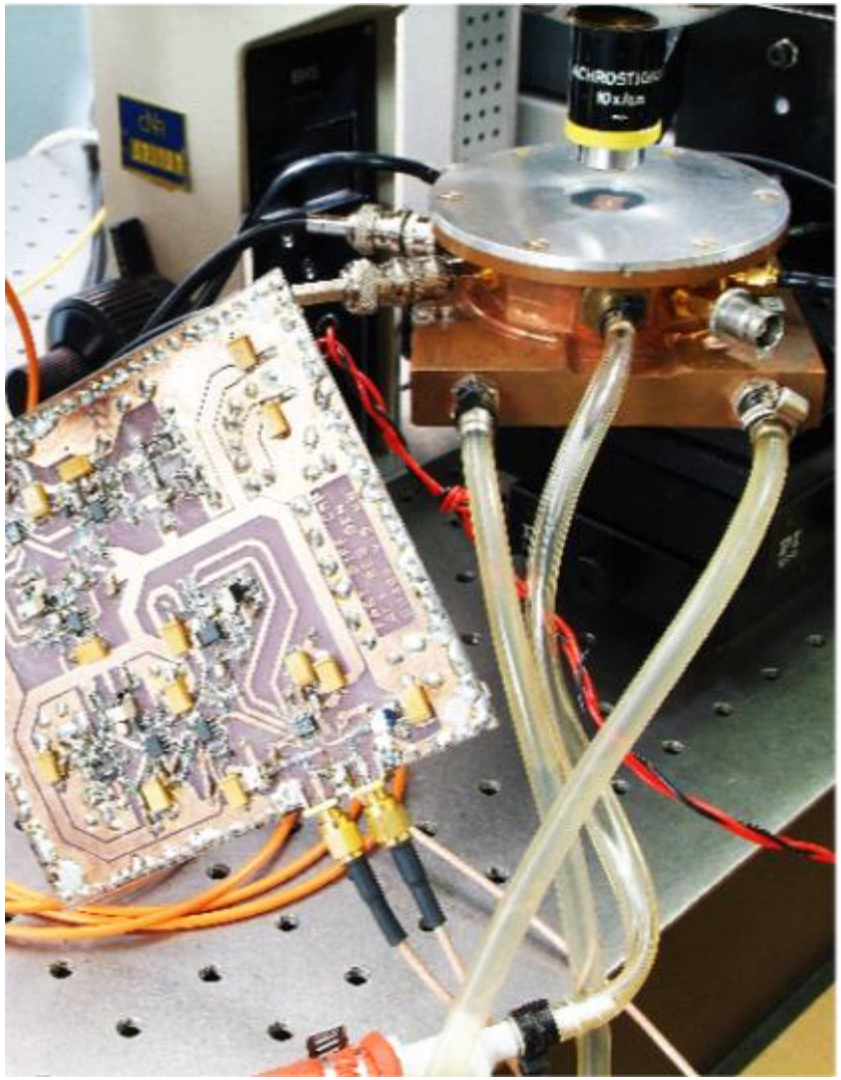
- Electromagnetic compatibility
- Electrical and electronic measurements
- Electric power systems and power electronics



ELECTRONICS BRANCH

CURRENT RESEARCH LINES

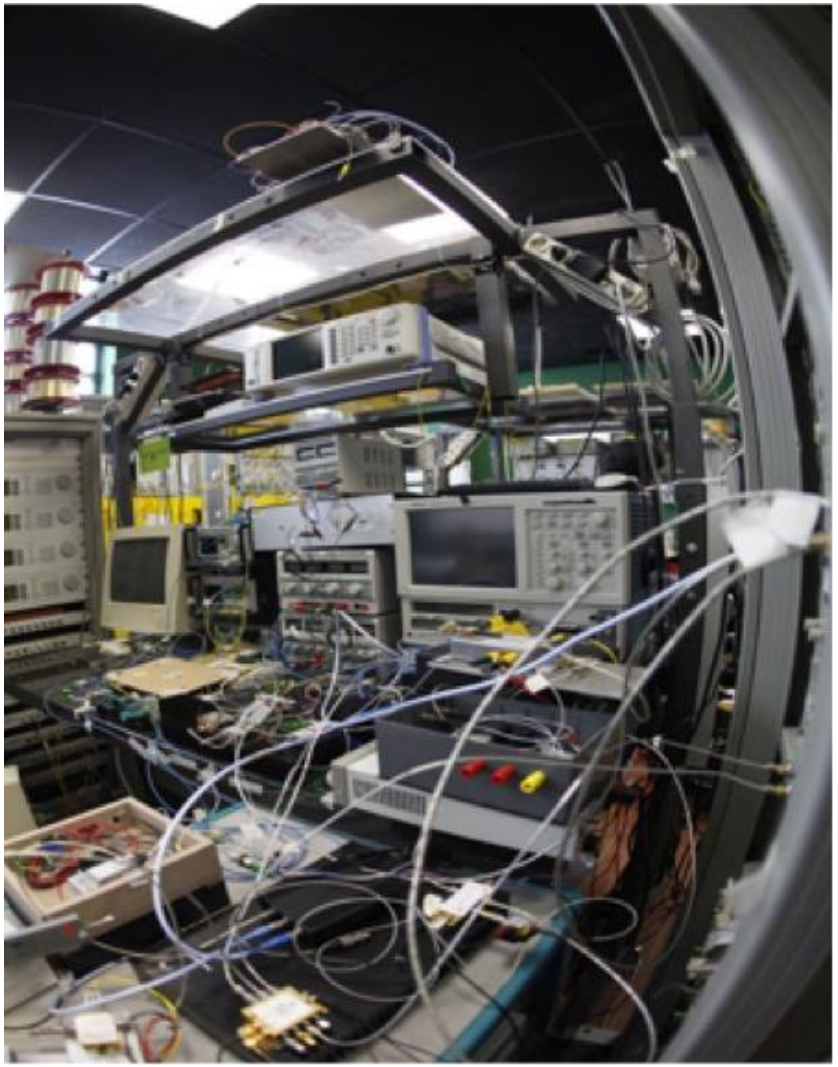
- Circuits and systems theory and applications
- Digital Systems
- Electron devices
- Electronic circuits design
- Radiation detectors
- Single-photon detectors and applications
- Smart microsensors and microsystems



TELECOMMUNICATIONS BRANCH

CURRENT RESEARCH LINES

- Applied electromagnetics
- Information transmission
- Networking
- Remote sensing
- Signal processing for multimedia and telecommunications



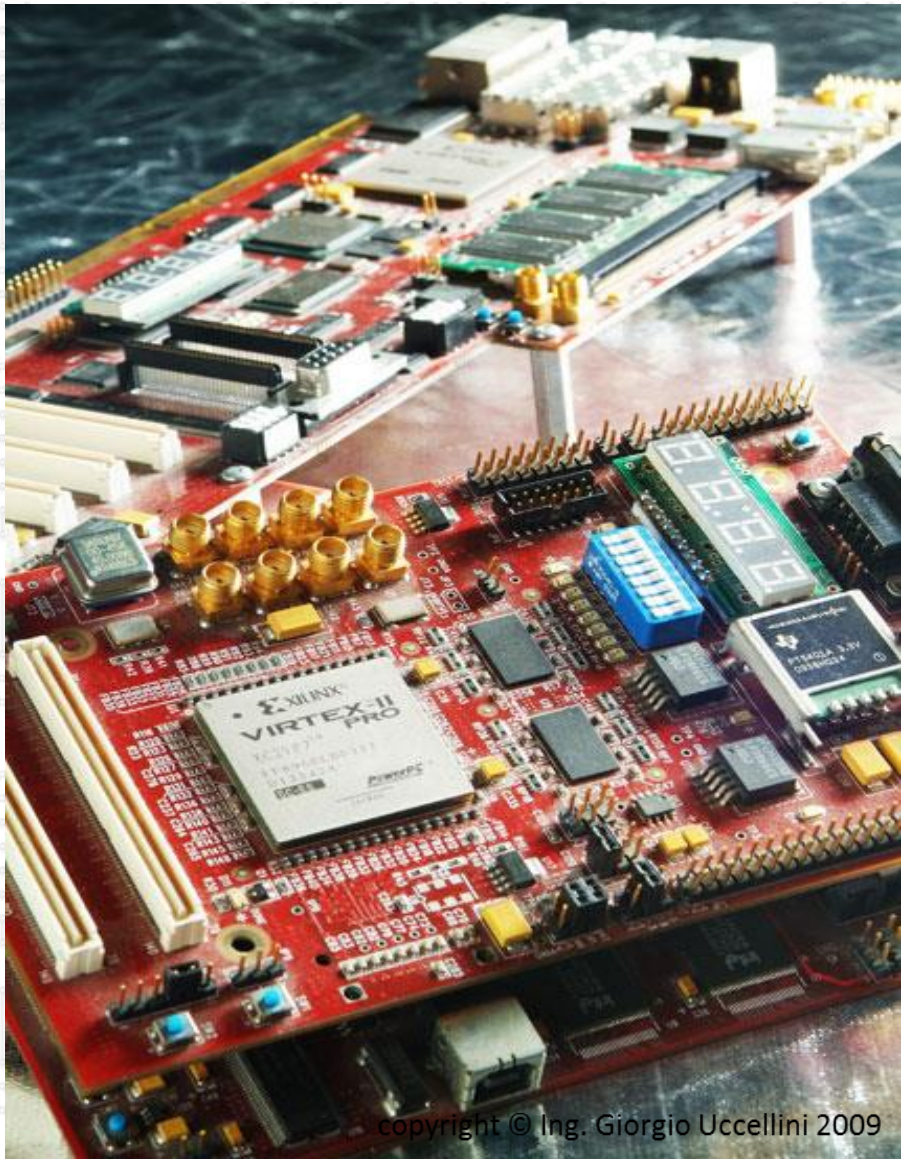
COMPUTER SCIENCE AND ENGINEERING

CURRENT RESEARCH LINES

- Advanced software architectures and methodologies
- Artificial intelligence and robotics
- Data, web, and society
- Information systems
- System architectures

Competence: Computer Science and Engineering

- **Teaching:**
  - **Bachelor, Master, and PhD Programs** in Computer Science and Engineering (Ingegneria Informatica) of Politecnico di Milano
  - **Undergraduate and graduate courses** in Computer science and engineering for all the Schools of Politecnico di Milano
- **Research goals:**
  - Long-term **visionary** research
  - **Interdisciplinary** and **applied** research
  - Application areas include, but are not limited to: biology, genetics, health, ambient intelligence, environmental protection, culture, digital entertainment, smart cities, smart energy, sustainability



Cross-fertilization (1)

Collaborations with people from the other areas of the Department, that show our collaborative potential:

- **Biology and health**: systems for prediction of biological properties from chemical structure, systems for genomic data management, and visual and audio systems for impaired people
- **Education and cultural heritage**: multimedia, multichannel communication systems; innovative formats for supporting e-learning technologies; high-level haptic interaction models and tools
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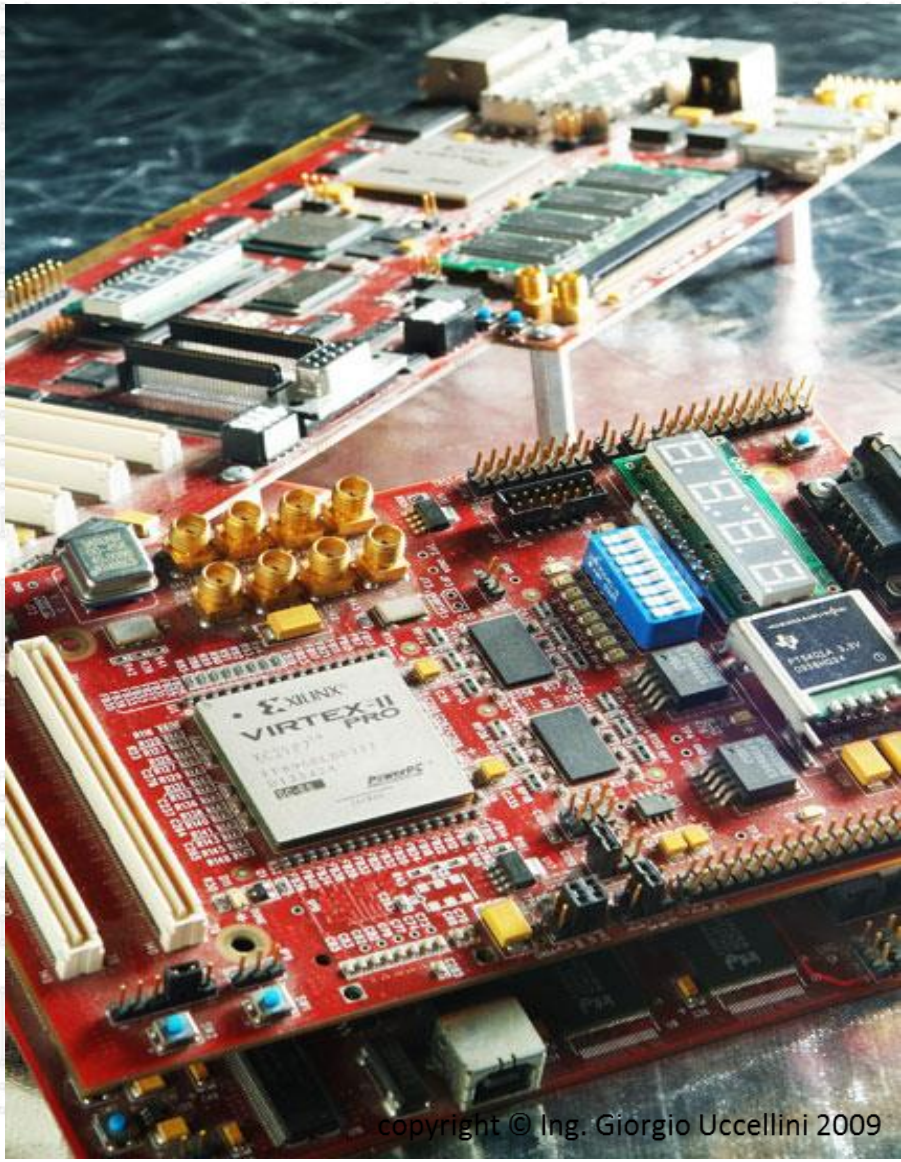
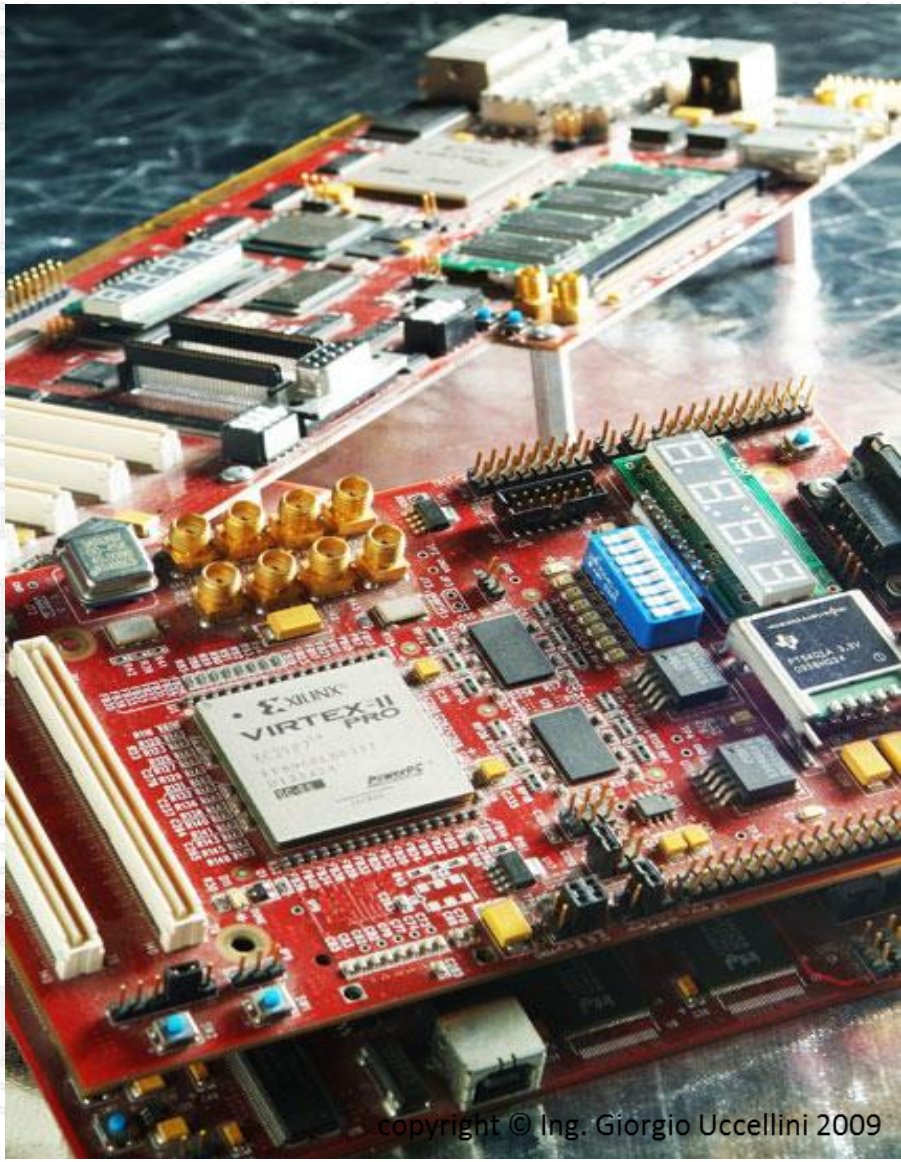


Cross-fertilization (2)

- **Energy and power management**: design of green data centers and power management for embedded systems
- **Entertainment: systems** for automatic generation of high-quality content for computer games and recommender systems for TV applications
- **Security, safety, and dependability**: systems for integrity management in power grids, emergency management information systems, and systems for anomaly detection and emerging threat analysis
- **Smart environments**: indoor and outdoor intelligent monitoring systems
- Transportation: railways diagnostics, urban traffic, and risk management



Credits

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