

The Doctoral School of Engineering Sciences (ED SPI), welcomes about 190 PhD students in the fields of Information and Communication Sciences and Technologies (Automation, Robotics, Electronics, Computer Science) and Engineering Sciences (Mechanical Engineering, Civil Engineering, Electrical Engineering, Process Engineering, Materials Engineering).

The SPI Doctoral School is integrated into Clermont Auvergne National Polytechnic Institute (INP) and is attached to the University of Clermont Auvergne. The Doctoral School also in strong partnership with the INRAe. Doctoral students are hosted in 7 laboratories, including 4 CNRS joint research units and two INRAe units, where PhD thesis work is supervised by more than hundred teacher-researchers (accredited to supervise research) in synergy with the industrial world, the Auvergne Rhône Alpes region and the European area. About 50 PhD theses are defended each year.

Research themes in Engineering Sciences revolve around objects and systems invented by man and bring together actors concerned with scientific issues arising from technological locks. The scientific policy of the SPI doctoral school is built upon the policies developed in its laboratories. The latter cover a vast disciplinary field including the following research themes:

- **Information and Communication Sciences and Technologies** (perception and artificial vision, image processing, intelligent sensors, robotic systems' control, electronic and optoelectronic

components and systems, electromagnetics, artificial intelligence, computer science)

- **Materials Engineering, Mechanics, Civil Engineering** (materials and structures, probabilistic mechanics of structures and materials, machines, mechanisms and industrial systems, civil engineering structures, soils and structures, modeling and control of complex dynamics for the management of ecological or territorial systems
- **Process engineering** (chemical and biochemical engineering).

Research work is regularly conducted in partnership (20% of theses have CIFRE funding) with public bodies: INRAe, CEA, CNRS, DGA, ONERA, SNCF ; large companies : Michelin, Renault, Stellantis, Valeo, Siemens, Nexter, EDF, SNCF ; small or medium sized innovative businesses : Biobasic Environnement, Digital Design, ITMI, Ligeron SA, Sherpa, Logiroad, Sol Solutions, etc.

Some figures on the SPI Doctoral School

190

PhD students
per year

59% whom are
international



Employment rate for doctors
3 years after degree

97%

(promotion 2018)

40 to 60

Thesis defenses

30 to 40

Dual-degree thesis programs

ED SPI PhD SPECIALIZATIONS

- PhD in Electric, electronic and system engineering
- PhD in Industrial engineering
- PhD in Process engineering
- PhD in Image, machine perception, robotics
- PhD in Computer science
- PhD in Materials Engineering
- PhD in Mechanics, mechanical engineering, civil engineering

RESEARCH UNITS AFFILIATED WITH THE ED SPI

- Pascal Institute (IP)
- Laboratory of Informatics, Modeling and Optimization of Systems (LIMOS)
- Clermont Laboratory of Physics (LPC)
- Clermont-Ferrand Institute of Chemistry (ICCF)
- Engineering Laboratory for Complex Systems (LISC)
- Technology and Information Systems for Agrosystems (TSCF)
- Resources



THÉMATIQUES DE RECHERCHE

Process engineering, industrial engineering, civil engineering, electronics and systems, computer science, materials science, mechanics, robotics, image processing



CONTACT US

Doctoral School of Engineering Sciences (ED SPI)

Campus des Cézeaux
8 avenue Blaise Pascal
TSA 60026
63178 AUBIERE CEDEX, France

+33 (0)4 73 40 76 09

edspi.dred@uca.fr

spi.ed.uca.fr

