Living in Grenoble

Grenoble is located at the foot of the Alps and stands at the hub of technological research, where its many students are busy building towards the future - on cultural foundations that date back over two millennia.

You will find many ways to spend your spare time in Grenoble. You will have the opportunity to discover the surrounding mountains, covered with snow throughout winter (ski resorts are only thirty minutes away by bus!). Spring time and fall are perfect for long walks in the forests and for mountain climbing. Summer is warm! Swimming pools and lakes are perfect for relaxing.

Grenoble is a nice, human-sized town. You will enjoy walks in the old city center... And don’t forget the modern art museum!

Contacts

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Control and information technology are increasingly used in the design and operation of modern engineering systems. The pervasive infiltration of computer systems (embedded intelligence and networks) in engineered products and in society requires new insights and ideas in engineering research, education and entrepreneurship. A model-based system integration methodology combined with an overall emphasis on compositional design then appears as a crucial issue in modern process automation and research in automatic control.

The MiSCIT curriculum consequently includes advanced topics in modeling, optimization, automatic control and communication. The theoretical concepts are supported by dedicated methodologies (e.g. for data assimilation, nonlinear control, networks security, supervision, embedded control . . . ) and numerous challenging applications (e.g. thermonuclear fusion, car engines, ventilation systems, climate change . . . ). Our aim is to provide a high level of knowledge and skills for research and developments in process modeling and control, from the latest theories to their applications.

Toward research and industry

A choice between two specialties is offered:

- **Industrial Processes Automation (IPA)**
  - aims at an engineer career or applied research, with a focus on automation-oriented topics (networks, real-time implementation...), labs, team working and communication, technological innovation and the adaptability to new environments.

- **Control and Systems Theory (CST)**
  - is oriented toward theoretical research, with advanced courses in feedback control and in applied mathematics, the development of analytical skills and independent working capabilities.

The classes are in English and organized in two semesters:

- **September to December**: theoretical classes and labs.
- **January to June**: design project, seminars (January) and industrial or research internship (5 months).

**Master Thesis (24 ECTS)**
- Efficient methods in optimization
- Introduction to data assimilation
- Modeling and control of partial differential equations
- Model predictive control

**CST Specific classes (18 ECTS)**
- Nonlinear and predictive control
- Modeling and control of partial differential equations
- Introduction to data assimilation
- Efficient methods in optimization

**IPA Specific classes (18 ECTS)**
- Embedded control, Labview and modeling labs
- Communication systems
- Safety, supervision and diagnosis
- Network applications

**Master Thesis (24 ECTS)**
- Project management, seminaries and project
- Public speaking or french
- Discrete event systems
- Communication systems
- Modelling for control and system identification
- Project management, seminars and project

**Classes and targeted skills**

**Admission requirements and tuition fee**

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- **January to June**: design project, seminars (January) and industrial or research internship (5 months).

The acceptance for entry and organization in two semesters: The above skills and independent working capabilities require control and in applied mathematics, the development of analytical skills and independent working capabilities, with a focus on new environments. Our aim is to provide a high level of knowledge and skills for research and developments in process modeling and control, from the latest theories to their applications.

- **September to December**: theoretical classes and labs
- **January to June**: design project, seminars (January) and industrial or research internship (5 months).

The prospective student should:

- hold a M1 (EU), bachelor (US) or equivalent degree in Science or Engineering, obtained after four full years of University studies
- have followed basic classes in Automatic Control
- prove an English proficiency with CEFR (B2), TOEFL (IBT 87-109), IELTS (5.5-6.5), TOEIC (785-945) or equivalent
- Professional experience and reference letters are also key issues in the applications evaluation.

Most of the tuition fee - approximately 6000 € is funded directly by the French Higher Education Department. See the University website for more details on the tuition.

Université de Grenoble

Université de Grenoble (UG) is one of Europe’s leading universities. It offers its students high-quality education, providing them with a passport to the professional world. The University of Grenoble (UG) is one of Europe’s leading universities in terms of its educational and research programs. It offers a wide range of degree programs in a variety of fields, including science, engineering, and humanities. The University also has a strong emphasis on international collaboration and partnerships, with numerous exchange programs and joint research projects with universities and organizations around the world.

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Freshmen and sophomore classes are offered in the first year of the program. The University of Grenoble (UG) offers a wide range of degree programs in a variety of fields, including science, engineering, and humanities. It offers a strong emphasis on international collaboration and partnerships, with numerous exchange programs and joint research projects with universities and organizations around the world.

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