

PEDAGOGICAL OBJECTIVES

Acquire a very good theoretical knowledge which could be developed by a variety of applications.

Europe needs an effective method that will allow the European Community to take up global leadership in selected strategic policy areas. Europe is home to a large advanced technology based aerospace and robotics industry that supplies a significant part of the world's commercial requirement in these domains.

PERSPECTIVES

This Master is designed to promote a high quality educational offer in the domain of autonomous systems and robotics systems. After graduation, the students will master competences of different areas of this multidisciplinary area: electrical engineering, computer and science engineering, mechanical and science engineering and general training.

Students will have the following skills: scientific and technical knowledge of autonomy engineering, capacity to develop and design innovative autonomous systems, capacity to work both independently and in multidisciplinary teams, to communicate by written and oral presentations, in an international context, capacity to transfer high techniques methodology from university to industry, competency to manage an engineering team, ability to understand different European cultures and languages.

Potential jobs are:

- government, fire and rescue, energy sector, agriculture,
- forestry - fisheries,
- earth observation,
- remote sensing, communication,
- broadcasting, archaeology, surveillance...

RESEARCH

The capacities necessary in participating in this master are those of autonomous systems: terrestrial or aerial. The members of the consortium are well known for their research in these domains. They also have an extended experience in teaching at the master's level and PhD thesis supervision. As senior members of the IEEE (Institute of Electrical and Electronics Engineers), they also have many duties in editing and promoting scientific documentation. Common research axis allows them to meet to perform common research.

LABORATORIES

- IBISC
- UEVE
- LMEE
- UEVE
- Chair of control
- Poznan University of Technology

SOCIO-ECONOMIC PARTNERSHIPS

The industry contributions and collaborations of the consortium are extensive. The University of Evry works with CNES, CEA... UEVE has close ties with the aerospace industry of Paris area. UEVE also has industrial contacts in the area of vehicular systems. This cooperation leads to cooperative research activities, student internships in the cited companies, and industrial contracts awarded to UEVE.

Poznan University of Technology works closely with scientists and scholars from other technical universities in Poland and European countries. It cooperates with KUKA (producer of industrial robots), Germany and with KUKA in Poland and Volkswagen in Poznan. All scientific projects related to automation and robotics carried out by the Chair of Control and Systems Engineering are supported by the State Committee for Scientific Research, the governmental institution responsible for research in Poland.

PRACTICAL INFORMATION

LOCATION

Evry

The courses of the third semester are scheduled in the university of Evry.

Poznan

Students keep the choice for the fourth semester, either in Poznan or in Evry.

CONTACT

Secretariat

• Diallo Aissatou, aissatou.diallo@ufrst.univ-evry.fr

Responsibles

- Yasmina Bestaoui Sebbane, yasmina.bestouai@ufrst.univ-evry.fr
- Krzysztof Kozlowski, krzysztof.kozlowski@put.poznan.pl

NOTES...

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PARIS-SACLAY

SCHOOL

INGÉNIERIE, STI

MASTER

Électronique,
énergie électrique,
automatique (E3A)

Électronique, énergie électrique, automatique (E3A)

PARCOURS : Smart Aerospace and Autonomous Systems (SAAS)



The important application potential of Autonomous Systems and Smart Aerospace vehicles has helped them to become the new focus of education. The present master provides the theories and methods that are useful for understanding and designing autonomous systems. The purpose of this master is to render the students and engineers familiar with the methods of modeling/analysis/control that have been proven efficient through research. The scope is the mechanics and control of autonomous systems. It covers the kinematic and dynamic modeling, analysis of autonomous systems as well as the methods suitable for their control. It contains the theoretical tools necessary for analyzing the dynamics and control of autonomous systems in one place. The topics that are practical and are of interest to autonomous robot designers have been picked from advanced robotics research literature. These topics are sorted appropriately and will form the contents of the master.

PREREQUISITES

Qualification in aeronautics, electrical engineering, computer science engineering, systems engineering or mechanical engineering.

