

Recruitment Associate/full professors School year 2012-2013

Short profile	Advanced control for Energy systems		
Category	MCF	Job number	397
Posted	26-1		
Field of expertise	Section 1 : 61		
	Section 2 : (eventually)		
Position available	01/09/2012		
School to which the position is attached	Ense ³		
Associated Research lab	Gipsa-lab		
Location	Site : Grenoble		
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Grenoble INP, Grenoble Institute of Technology has been training engineers, and PhDs, and developing outstanding international research for the past hundred years. As a public Higher Education Institution and a leader in innovation, it is one of the preferred partners of the industrial world. As a cofounder of MINATEC, and an active member of Grenoble Innovation University, it is involved in international projects. Grenoble INP, Grenoble Institute of Technology is made up of approximately 1100 staff (administrative and academic), 6 engineering schools, 5400 students and 32 Research labs.

[Lien internet Grenoble INP](#)

School to which the position is attached

Ense³ – Energy, Water and Environment is part of Grenoble Institute of Technology. Owing to its outstanding scientific environment and its pioneering activities linked with hydroelectricity, Grenoble has always been in the forefront of the development of new technologies in the field of energy and water management. Taking full advantage of this background, the Ense3 school trains high-level engineers and PHDs able to take up the challenges associated with the new energy order, with the increasing demand of water, both in quantity and quality, and with the sustainable development and country planning.

Ense³ is composed of more than 1000 students (engineer and Master degrees), 100 permanent teaching staff, 350 temporary teachers (from research labs or industry), 50 persons as technical support

This school is very close from industry and research, as illustrated by technological platforms (PREDIS, IEE, ...), used by the three partners (Industry, Research and teaching). This is the key point to insure up-to-date learning programs, adapted to industry needs and including the most recent technological evolutions.

Ense³ is open to the world and its challenges, promoting international mobility of the students as well as various origins.

Web site Ense³: <http://ense3.grenoble-inp.fr/index.jsp>

Teaching experience

ENSE3 is an engineering school in Energy, Water and Environmental sciences that belongs to the Grenoble Institute of Technology. (<http://ense3.grenoble-inp.fr/>). Grenoble is one of the most attractive towns for studies In Europe. ENSE3 belongs to the first twenty French engineering schools.

The study syllabus includes post-graduate and graduate programs, where Automatic Control is needed for control and monitoring of complex systems.

The *Maître de Conférences* will be involved in Control and Information technology courses in the ENSE3 engineering program (<http://ense3.grenoble-inp.fr/>). He will participate in the Master programs in “Automatic Control, Systems and Information Technology” and “Nuclear and Energy Engineering”. He will also be involved in programs for part-time students in Energy Production and Supply.

He will participate in Labs, Tutorials (Matlab/Simulink), and courses at various levels.

Associated research lab

Gipsa-lab is a research unit jointly depending on French CNRS, Grenoble-INP group, Joseph Fourier University and Stendhal University, also having agreements with French institute INRIA, Grenoble Observatory and Pierre Mendès France University.

With about 300 people including around one hundred of PHD students, GIPSA-lab is a multidisciplinary research center developing fundamental as well as applied researches on **complex signals and systems**. It is internationally renowned in **Control, Signal and Image processing, Speech and Cognition**, and develops projects in the challenging fields of energy, environmental problems, communication, smart systems, health, or linguistic engineering.

From the nature of its research topics, Gipsa-lab keeps constant relationships with the industrial world.

Its researchers are strongly involved in various teaching activities of Grenoble universities and engineering schools.

Web site _Gipsa-lab : <http://www.gipsa-lab.grenoble-inp.fr/>

Research experience

The Control Systems Department of Gipsa-lab (www.gipsa-lab.fr) develops theoretical and applied research in analysis, modelling, observation, control and diagnosis of dynamic systems.

The provided methods are supported by some application frameworks, in particular the production and management for Energy/Environment systems. Let us mention few of them as hydraulic plants, new wind energy, fuel cells, smart building, or irrigation channel and new combustion engines.

The successful candidate will join the Control Systems Department and will participate in research projects concerning Energy and Environmental systems. He/She must have solid scientific skills in some of the above-mentioned topics in order to propose innovative solutions.

Finally, applications showing evident scientific open-mindedness and strong national and international collaborations would be highly appreciated.

Key-words: Control, observation, fault diagnosis, energy applications, environmental applications.