ASSISTANT PROFESSOR (TENURE TRACK) IN ENERGETICS

(SYSTEMS FOR THE HYDROGEN ENERGY SECTOR)

Establishment: **MINES ParisTech (Ecole Nationale Supérieure des Mines de Paris)**
Appointment: **Centre Procédés, énergies renouvelables et systèmes énergétiques (PERSEE)**
Processes, renewable energies and energy systems

In the continued development of its research and teaching activities in the field of systems for the hydrogen energy sector, MINES ParisTech has a vacancy for an Assistant Professor position (Tenure Track) in Energetics.

Starting on a three-year fixed-term contract, this position is intended for a young researcher (M/F, PhD + 0-5 years) keen on multidisciplinary work at the interface of the basic research and the industrial world. The selected candidate will have the opportunity to work in close connection with the business and the academic communities and will participate in the research contracts of his or her team. He/she will also have the opportunity to supervise PhD research and participate in lectures taught in the School's different education programs. **This position is intended to evolve into a permanent teacher-researcher post** after a period of three years, as part of a Tenure Track procedure that assesses the candidate's successful integration into the research team and his/her ability to adopt the research model of the MINES ParisTech research Centers.
Candidates can find a description of this procedure on the MINES ParisTech website, at: http://www.mines-paristech.fr/Ecole/Recrutement/Travailler-a-MINES-ParisTech/

The vacancy has been proposed by the MATPRO group to reinforce its activities in the field of systems for the hydrogen-energy sector.

JOB DESCRIPTION

The ideal candidate should have demonstrated his or her ability to develop academic research in the hydrogen-energy sector (systems activities) and be motivated to develop the international visibility of his/her activity. The candidate should be sufficiently autonomous to generate, manage and promote innovative collaborative projects and find external resources through partnerships with different actors in the industrial and academic worlds.

Research

The research mission will focus on the systemic aspects of MATPRO group's activities related to the hydrogen-energy sector. This mainly includes studies on low-temperature fuel cell systems (PEMFC), stacks and auxiliaries, for all types of applications (transport, stationary, etc.) and developments concerning electrochemical compression / purification.
The candidate will have the opportunity to rapidly evolve towards hydrogen production systems and coupling with renewable energies. He/she will benefit from the skills developed in the group and rely on the expertise of another group at the Center (ERSEI) working in the field of renewable energy.
The key interest of the position lies in its scope of activities, ranging from establishing and monitoring tests in the laboratory to modeling the issues studied.
The recruit's place in the group combined with the research Center's operating modes will offer him/her opportunities to quickly develop creative research programs and ultimately take responsibility for the theme. He/she may thus occupy a recognized position in the community, including through the establishment of new

collaborations, directly with industrial players in the field or in the context of open calls for proposals, for local, national and international scales.
The candidate will quickly integrate networks in which the research group is already present, such as the FCH Joint Technology Initiative (Hydrogen Research Europe), the Joint Program on Hydrogen and Fuel Cells of the European Energy Research Alliance (EERA) and the French association on hydrogen and fuel cells (AFHYPAC) and expand them to develop his/her missions.
Finally, he/she will work closely with other researchers in the group, Center and Institute CARNOT M.I.N.E.S., especially those involved in the development of the hydrogen energy sector at large.
He/she will also be able to benefit from the support of students from various backgrounds and with different levels of training, from internships to PhD students, and be encouraged to supervise them.

Teaching

The candidate will have the opportunity to contribute to the School's various courses and training programs. He/she will be encouraged to teach small classes or set up new courses in energy that will enrich the educational offer of MINES ParisTech, and its site at Sophia Antipolis.

Qualities and skills required

This position would suit a young research graduate from a top engineering school or university, with a PhD in energy, a strong interest in the hydrogen-energy sector, and experience of systems and electrochemical processes. Skills in electrical engineering, thermics, fluidics and electrochemistry as well as systems modeling are expected. Significant work experience in a research laboratory different from his/her PhD laboratory, and preferably abroad, would be highly appreciated.
The candidate must have demonstrated a good capacity to work in a team, in order to be able to develop his/her research activities in collaboration with the PERSEE Center teams and other French and foreign laboratories, both academic and industrial. The candidate will have to collaborate in writing up project proposals, managing and/or coordinating projects, linking theoretical and experimental research, and carrying out modeling and numerical simulations. He/she must have demonstrated scientific and/or educational responsibilities and organizational capacities.
Fluency in spoken and written English is imperative.

APPLICATIONS

Applications should include the following:

- Motivation letter
- Research and teaching statement (project for the next years in relation to the research priorities in the proposed vacancy)
- Detailed CV
- List of research work and publications
- PhD thesis dissertation and defense reports
- If possible, three letters of recommendation addressed to us directly by key individuals chosen by the candidate. (Failing this, the application should include at least the names and contact details of three scientific personalities who may be asked to give an opinion on the candidate's work and skills.)

The file should be sent no later than March 31 2019 for the attention of the Director of the Center, Mr. Arnaud RIGACCI, and the head of the MATPRO group, Mr. Christian BEAUGER, by e-mail to arnaud.rigacci@mines-paristech.fr and christian.beauger@mines-paristech.

For more information on the scientific aspects, candidates may contact Mr. Christian BEAUGER.