FULL-TIME RESEARCH AND TEACHING ASSISTANT POSITION

IN EMBEDDED ELECTRONICS

SCHOOL OF ENGINEERING

Reference: 2021/S102
Application deadline: 30/04/2021
Start date: 01/10/2021

Job Description

Located in the heart of Europe, in a dynamic area, the Brussels School of Engineering offers a multicultural, friendly and green working environment. In partnership with the Bioengineering Schools, it offers no less than three bachelor, 11 master, advanced master and two doctoral programmes. Each year, more than 200 civil engineers and bioengineers are graduating and able of playing an active, responsible and critical role as citizens in a changing world. Involved at the local, regional and international levels, the School actively contributes to the progress and well-being of society through applied and fundamental research at the highest level.

DEPARTMENT DESCRIPTION

BEAMS-EE – EMBEDDED ELECTRONICS RESEARCH UNIT

The BEAMS-EE group is active in the following research fields:

- Synchronization and localization for distributed telecommunication systems (Prof. F. Quitin)
- UAV-based wireless communication systems (Prof. F. Quitin)
- Sensor fusion with software-defined radios (Prof. F. Quitin)
- Systems-on-chips, Networks-on-chip (Prof. D. Milojevic)
- Design and optimisation of efficient hardware architectures and algorithms for ASIC and FPGA (Prof. D. Milojevic)
- Design and implementation of tools for system-level design for ASIC and FPGA (Prof. D. Milojevic)
- analog and digital DAQ electronics for the LHC/CMS experiment (Prof. F. Robert)
- didactics of electricity/electronics (Prof. F. Robert)

Further information on current research topics can be found on the following websites:

- https://sites.google.com/site/fquitin2/home
- http://beams.ulb.ac.be/~dmilojev/
- http://beams.ulb.ac.be/research-units/embedded-electronics

DESCRIPTION OF THE RESEARCH & TEACHING ASSISTANT POSITION

The candidate will be expected to conduct high-quality research, leading to a Ph.D. degree, in the field of embedded electronics, in one of the topics mentioned above. The topic of the research will be defined jointly with the candidate and the tutor.

The candidate will also take part in educational activities in the Bachelor and/or Master programmes of the School of Engineering: supervision of exercises, labs, projects, internships and master theses.

Education and research tasks will be evenly distributed and periodically re-evaluated.

The expected duration of a Ph.D. thesis is six years. A teaching assistant position is then granted for a first term of two years, renewable based on the opinion of the competent authorities for up to 2 further periods of 2 years (full time).
Profile
The position is open to graduates (120 ECTS master’s degree) in Engineering (electrical, computer engineering, electromechanical or biomedical) or Computer Science, complying with the enrolment conditions to the PhD programme in Engineering Sciences and Technology.

Required skills
- Autonomy, reliability, high motivation
- Ability to work in multidisciplinary teams
- B2 level in French and B2 level in English are required
- Innovative and creative thinking is a must

Teaching workload
The candidate will be involved in several of the following courses:
- ELEC-H-201 : Electricité
- ELEC-H-2001 : Electricité et électronique
- ELEC-H-301 : Electronique appliquée
- ELEC-H-305 : Circuits logiques et numériques
- ELEC-H-309 : Projet intégré
- ELEC-H-310 : Digital Electronics
- ELEC-H-314 : Instrumentation et électronique analogique
- ELEC-H-402 : Analog Electronics
- ELEC-H-409 : Digital architectures and design
- ELEC-H-410 : Real-time computer systems
- ELEC-H-473 : Microprocessor architectures
- ELEC-H-505 : Advanced digital architectures
- ELEC-H-516 : Programmable Logic Controllers

Interested?
For more information, please contact Prof. François QUITIN
(telephone: +32 2 650.28.29 – E-mail: fquitin@ulb.be).

Applications must be sent by e-mail to the rectorate of the Université Libre de Bruxelles (rectrice@ulb.be ) and to the faculty deanship (le-doyen-polytech@ulb.be).

They must include the following:
- a motivation letter
- a Curriculum vitae including a list of publications:
  *if you want you can complete a standard form via our website at https://www.ulb.be/fr/documents-officiels/completer-votre-cv-en-ligne. Once completed, it must be downloaded and attached to the application file.*
- a note on the applicant’s PhD research project (4 pages)
- two letters of reference

Equal opportunities policy
ULB’s personnel management policy is geared towards diversity and equal opportunities.

We recruit candidates on the basis of their skills, irrespective of age, gender, sexual orientation, origin, nationality, beliefs, disability, etc.
Would you like to be provided with reasonable accommodation in the selection procedure because of a disability, disorder, or illness? Do not hesitate to contact Marie Botty, the Gender and Diversity resource person of the Human resources Department - SPES (marie.botty@ulb.be). Be assured of the confidentiality of this information.


You will find all the regulations relating to research careers on our site at http://www.ulb.ac.be/emploi/academique.html.
EURAXESS SPECIFIC INFORMATION

Type of contract: temporary
Hours per week: 38
Main Research Field: Engineering, Computer Science
Sub Research Field: Communication engineering, Computer engineering, Electronic engineering, Industrial engineering, Computer architecture, Computer Hardware
Required educational level: Master level in Electrical engineering, Computer Engineering, Computer science, Electromechanical engineering

Required Languages:
Français : good
English: good

Required Research Experiences:
Researcher profile: Early stage researcher (0-4 years)