

## Professor

Ecole/Institution/Société:

**Vrije Universiteit Brussel, Belgium / Brussels**

Discipline:

**Electronics**

Type d'emploi::

**Full-time**

Date de publication:

**2022-03-01**

Personne à contacter:

**If you wish to apply for this position, please specify that you saw it on AKATECH.tech**

### **Professor 'Electronic (Control) Engineering'**

#### **1 - Working at the VUB**

For already 50 years, the Vrije Universiteit Brussel has stood for freedom, equality and connectedness. These values are strongly present on our campuses, in our students as well as our staff. At the VUB, you'll find a diverse collection of personalities: pure innovators and especially people who are 100% their authentic selves. With about 3,500 employees, we are the largest Flemish-speaking employer in Brussels, an international city with which we are all too happy to be connected, and around which our four campuses are located.

Our education and research are grounded in the principles of free research with an eye on human progress. We disapprove of every purely authoritative argument and guarantee the free formation of judgment that is necessary for this basic principle to be incorporated in the community.

The VUB is autonomous and managed democratically. As such, we guarantee fundamental freedoms within our university, as well as the right of the university community to be involved in making and checking university policy.

#### **The mission of the university includes:**

- the development, the transfer and the application of high-standing academic education and scientific research, free from any prejudice;
- community integration of this in a spirit of social compassion;
- critical development of everyone in light of the responsibilities borne in the community.

#### **2 - Position description**

The Faculteit Ingenieurswetenschappen, Department Elektriciteit, is looking for a full-time professor.

More concretely your work package contains:

#### **Education and Research domain:**

- Measurement, calibration and modelling of systems and components in transdisciplinary application domains including electronics, telecommunications, mechanics, electrochemistry, and biomedical engineering;

- Data-driven identification and modelling techniques starting from both noisy measured and simulation data. Specifically engineered experiments and excitation signals lie at the heart of these techniques;
- Use of statistical frameworks to determine uncertainty boundaries for all quantities obtained.

### **Education tasks:**

- You will run courses in the Bachelor in Engineering and the Master in Electrical Engineering:
- the Bachelor courses include electrical network synthesis, system and control theory, and an immersion course covering the fields of analogue and digital electronics, control theory, photonics, and telecommunication;
- the Master courses cover the topics of electrical measurements and identification.

### **Research tasks:**

- You will inspire and oversee the research on the identification and modelling of time- and parameter varying systems in the presence of nonlinear distortion. The focus will be on applications in integrated electronic circuits, 'smart' cities, biomedical systems, and electrochemical processes;
- You will inspire the team to collaborate in a national and international context, and detect and develop relevant real-world and industrial applications, and develop and effective solutions;
- You will inspire and guide a research group with several PhD collaborators and master students;
- You will train and motivate co-workers, and engage and interact with your colleagues in a friendly and open-minded way;
- You will be collaborating with other research institutes, industrial partners and with other universities. You will facilitate and organize these interactions and define joint projects, manage these projects, and report results adequately.

### **Other tasks:**

You will participate in administrative and policy-supporting tasks, [e.g.](#) by serving on commissions that support the operation and good governance of the faculty of engineering, and by joining scientific and educational outreach activities.

For this function, our Brussels Humanities, Sciences & Engineering Campus (Elsene) will serve as your home base.

### **3 - Profile**

What do we expect from you?

- You hold both a degree in academic engineering in electronics or information theory and a PhD in Engineering.
- You can convey knowledge to the audience in an inspiring way, and adapt seamlessly to the level of the audience, and display empathy towards the public.
- For the Bachelor courses, in-depth knowledge of the Dutch language is crucial and required, as these courses are completely taught in Dutch. The courses in the Master are taught in English, and hence these require a very good knowledge of English as well.
- You have demonstrable and quantifiable expertise in the following scientific domains:
- in-depth expertise in data-driven identification of time- and parameter varying systems in the presence of non-linear distortions, focused on spectrally based methods;
- in-depth knowledge of measurement and signal processing techniques in the time domain and the frequency domain;

- a good knowledge of statistical techniques underpinning data-driven system identification and leading to the quantification of uncertainty bounds.
- Possessing the capabilities to define, guide, and execute research and innovation projects, experience with the following is appreciated:
- data-driven modelling using 'machine learning';
- integrated electronics, mechanics, and/or electrochemistry applications;
- collaborative interdisciplinary and international research projects in the fields above.
- A practical and problem-solving mindset, excellent collaboration skills and the strong will to integrate well with all the research activities of the department are vital.
- You must be willing to integrate in the department ELEC and in the faculty of engineering, and define the steppingstones and the vision underpinning the scientific strategy of the department and the faculty.
- You subscribe to the university's vision of education. The full text in relation to this is available on the university website.
- Every first appointment is dependent upon the successful delivery of a teaching session.
- Members of the academic staff who, as title-holders, are charged with teaching assignments, must be able to demonstrate the required knowledge of the language of instruction for the relevant course units. Example: When a course unit is taught in English, the candidate is required to have the appropriate certificate. More information about the regulations concerning the language proficiency you can find via <https://jobs.vub.be/content/Regulations-concerning-language-proficiency/>

## **4 - Offer**

Are you going to be our new colleague?

- If the recruitment is in the rank of lecturer, you'll be offered a tenure track appointment, which implies an initial appointment as lecturer for a period of 5 years, with eligibility for tenure in the rank of senior lecturer by the end of this initial period.
- If the recruitment is in an other academic ranks, you'll be offered an appointment for 3 years, with eligibility for tenure in the same rank by the end of this initial period.

You'll receive a salary linked to one of the scales set by the government.

At the VUB, you're guaranteed an open, involved and diverse workplace where you are offered opportunities to (further) build on your career.

## **As well as this, you'll enjoy various benefits:**

- Full reimbursement for your home-work commute with public transport according to VUB-policy, or compensation if you come by bike;
- Cost-free hospitalisation insurance;
- The space to form your job content and continuously learn via VUB LRN;
- Excellent facilities for sport and exercise;
- Ecocheques;
- Delicious meals at attractive prices in our campus restaurants;
- An open, family-friendly work environment where attention is paid to work-life balance, and exceptional holiday arrangements with 35 days of leave (based on a fulltime contract).

## **5 - Interested?**

Is this the job you've been dreaming of?

- your motivation letter, including your vision on education and research, and an explanation about the development of your future research;

- your curriculum vitae, including you academic dossier;
- your degrees and diplomas (not applicable for VUB alumni) and language certificates.

Do you have questions about the job content? Contact Prof. Yves Rolain at [yves.rolain@vub.be](mailto:yves.rolain@vub.be) or on +32 (0) 2 629 29 44.

Would you like to know what it's like to work at the VUB? Go to [www.vub.ac.be/vacatures](http://www.vub.ac.be/vacatures) and find all there is to know about our campuses, benefits, strategic goals and your future colleagues.

## **Job details**

**Title:** Professor 'Electronic (Control) Engineering'

**Employer:** Vrije Universiteit Brussel (VUB)

**Location:** Boulevard de la Plaine 2 Brussels, Belgium

**Job type:** Professor

**Field:** Biomedical Engineering, Communication Engineering, Control Systems Engineering, Electrical Engineering

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