

Full-time Position for a Professor in the Area of Machine Design, Automation, and Process Control, Department of Mechanical Engineering, KU Leuven, Belgium.

Description

KU Leuven has a full-time academic vacancy in the Department of Mechanical Engineering at the Geel campus. We are looking for internationally oriented candidates with an excellent interdisciplinary research record, with educational competencies within the field of mechanical design and project-based learning, and with a focus on applied research in collaboration with industry. The appointment will be made within the Department of Mechanical Engineering and Faculty of Engineering Technology of the Science, Engineering and Technology Group of KU Leuven.

Research at the Department of Mechanical Engineering focuses on the main societal challenges: sustainability of energy supply, mobility, healthcare and industrial innovation. The department is involved in a large number of local, national and international research projects and has strong links with the technology transfer services of the university and with institutes for technology transfer on Flemish and European level. The department has about 45 professors and 400 total staff. The department is particularly active in spin-off creation. Our spin-offs include leading companies such as Materialise NV and Siemens Industry Software NV.

The research group of the Department of Mechanical Engineering on the campus in Geel focusses on two areas of application: the food industry, agriculture and horticulture on the one hand, and thermal energy systems on the other. In both domains, the campus can rely on a long tradition of practice-based research and services (both regional and European). As a result, high-quality research infrastructure is available, as well as an extensive international network, connections with companies and non-profit organizations and a supportive working environment. KU Leuven is also a major partner in Energyville, a joint venture focusing on research on the sustainable energy system of the future (<https://www.energyville.be/en>). The research to be developed will further strengthen the position of the campus in one of these areas of application and will achieve additional technology transfer in these and related sectors. At least one additional professor will be hired in the near future to further strengthen this research area.

The Faculty of Engineering Technology organizes education in applied engineering programs. It relies on an extensive national and international network, both in the academic and business world.

Duties

Research

Your research focuses on advanced mechanical engineering technology (machine design, automation and process control). Given the current spearheads of research on the Geel-campus, applications are preferably situated in the food industry, agriculture and horticulture, or in the sector of thermal energy systems.

Examples of possible research topics include:

- Mechanical design of machines taking into account dynamic behaviour, extreme requirements in terms of hygiene, easy cleaning and maintenance.

- Optimal control of processes involving a large variability of raw materials and products with typical material characteristics (viscoelasticity, non-Newtonian fluids,...) and the need to respond flexibly.
- Optimal control systems to exploit available thermal energy and integrate it into global energy solutions.
- Correlation-based models for optimization and improved integration of thermal systems.

Other research topics related to machine design, automation and process control may also be considered.

There are obvious opportunities for application and technological transfer in this research domain, possibly in collaboration with other research groups at the campus or within the department.

Expectations:

- You develop an international-level research program within one or more of the application domains mentioned above.
- You develop an international partnership around your research program, both within the academic world and with the regional and international industry.
- You work closely with the research units of the Department of Mechanical Engineering and of the campus in Geel, and you also set up partnerships outside these entities. You are open to collaboration and joint research projects.
- You strive for excellence in your research and contribute to the further development of the campus and the department.
- You are able to acquire competitive project-based government funding and bilateral industrial funding.
- You publish in international journals and professional literature and supervise doctorates.
- You pay attention to the transfer of applied research to industry or government.

Education

The academic programs offered by this faculty aim at educating engineers with a strong focus on industry-ready technological development. You provide high-quality education for the Bachelor of Engineering Technology, the Master of Engineering Technology: Electromechanics and the Master of Engineering Technology: Energy, mainly at the Geel-campus. This includes courses in the field of mechanical design, control and automation. You contribute to the faculty's and the university's pedagogical project through the supervision of student projects (for example bachelor's and master's theses) and by acting as a promotor of PhD students. Other campuses may also use your expertise to provide education. All professors are expected to teach a few basic undergraduate courses.

You develop your teaching in accordance with KU Leuven's views on activating and researched-based education and with a clear commitment to the quality of the program as a whole. You make use of the possibilities for educational professionalization offered by the faculty and the university.

Your teaching duties are determined in agreement and are based on your specific profile. The scope is limited in the first years of your appointment. In your further career, the faculty will also pay a great deal of attention to the balance between research and teaching time.

Service

You are prepared to provide services to the scientific community, to society and to the university in function of the needs and your personal interests. In particular you are willing to provide services to the government and to industry in the context of applied research. To this end, you maintain close contact with the (local) industry and you keep yourself informed about both scientific state-of-the-art and industrial state-of-practice.

You play an active part in advertising the Faculty of Engineering Technology towards new students and the wider professional field: you actively participate in open days, networking events and fairs,...

Profile

You have a PhD in Engineering Technology or in Engineering Science or a related degree. You have experience in the field of machine design and automation (e.g. via the subject of your doctoral thesis, research projects and publications).

You have a strong research track record in the discipline and/or relevant industrial experience. International experience and industrial experience are important assets. You have the ambition to contribute to the transfer of research results to industry and to society. You have a vision on research in machine design, automation and process control including the possible synergies with ongoing research projects on the Geel campus and within the Department of Mechanical Engineering.

You have a vision on providing quality academic education in your field. Teaching experience is a plus.

You possess organizational skills and have a cooperative attitude. You also possess leadership competencies in a university or industry context.

A good command of English is a requirement. The official administrative language at KU Leuven is Dutch. If you do not speak Dutch (or do not speak it well) at the start of employment, KU Leuven will provide language training to enable you to take part in administrative meetings. Before teaching courses in Dutch or English, you will be given the opportunity to learn Dutch resp. English to the required standard.

Offer

We offer full-time employment in an intellectually challenging environment and with a large degree of freedom.

KU Leuven is a research-intensive, internationally oriented university that carries out both fundamental and applied scientific research. It is highly focused on interdisciplinary and multidisciplinary research and strives for international excellence. In this regard, the university actively works together with research partners in Belgium and abroad and provides its students with an academic education that is based on high-quality scientific research in a collaborative and inclusive environment.

Depending on your record and qualifications, you will be appointed in one of the grades of the senior academic staff: assistant professor, associate professor, professor or full professor. If you are a junior researcher you will, in principle, be appointed as assistant tenure track professor for a period of 5 years. If

your evaluation after this period is positive, you will be permanently appointed (i.e. tenured) as an associate professor.

You mainly work at the KU Leuven Geel Campus. This campus is one of the operational sites of the KU Leuven multi-campus Faculty of Engineering Technology. The campus is focused on technological and industry-oriented training and research. Other campuses can also use your expertise for teaching assignments.

KU Leuven is well set to welcome foreign professors and their family and provides practical support with regard to immigration & administration, housing, childcare, learning Dutch, partner career coaching,... To facilitate scientific onboarding and accelerate research in the first phase a starting grant of 100.000 euro is offered to new professors without substantial other funding, appointed for at least 50%.

Interested?

For more information on the contents of the job, please contact:

- Prof. Dr. ir. Joris De Schutter, departmental chair of the Department Mechanical Engineering (joris.deschutter@kuleuven.be, tel.) or
- Prof. Dr. ir. Paul Leroux, campus chair of Geel Campus (paul.leroux@kuleuven.be, +32-14-721306)

You can submit your application until ??...2019, only through our online application system. If you have problems submitting your application online, please send an email to solliciteren@kuleuven.be.

Add to your application following documents in English (more information is available on the KU Leuven job site):

- your biosketch in which you indicate your added value as an academic for research, education and service to society of your past career and of your future activities (maximum 2 pages);
- a file on your five most important publications or realizations;
- an extensive cv including a full publication list and if applicable a portfolio of your important projects;
- your research plan with focus on the development of your research line and research team in relation with the colleague-researchers of the entity of employment (maximum 4 pages);
- your vision on academic education and its organization (maximum 2 pages);
- your contribution to society by outreach and public communication on science and technology, internal representation in boards and councils and service activities directly in relation to your developed expertise (maximum 1 page);
- your vision on leadership (maximum 1 page).

KU Leuven is committed to creating a diverse environment and is therefore an equal opportunity employer. It explicitly encourages candidates from groups that are currently underrepresented at the university to submit their applications.

You can apply for this job no later than August 19, 2019 via the [online application tool](#)

KU Leuven seeks to foster an environment where all talents can flourish, regardless of gender, age, cultural background, nationality or impairments. If you have any questions relating to accessibility or support, please contact us at diversiteit.HR@kuleuven.be.