

Professor in Mechanical Engineering: Vibration and  
Acoustic Control in Automotive Engineering  
KU Leuven

Direct Link: <https://www.AcademicKeys.com/r?job=249848>

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Posted Dec. 3, 2024, set to expire Feb. 25, 2025

<b>Job Title</b>	Professor in Mechanical Engineering: Vibration and Acoustic Control in Automotive Engineering
<b>Department</b>	Faculty of Engineering Technology - Department of Mechanical Engineering <a href="https://www.mech.kuleuven.be/en/mod">https://www.mech.kuleuven.be/en/mod</a>
<b>Institution</b>	KU Leuven Leuven, , Belgium
<b>Date Posted</b>	Dec. 3, 2024
<b>Application Deadline</b>	Feb. 25, 2025
<b>Position Start Date</b>	Sep. 1, 2025
<b>Job Categories</b>	Assistant Professor Associate Professor Professor
<b>Academic Field(s)</b>	Mechanical Engineering
<b>Job Website</b>	<a href="https://www.kuleuven.be/personeel/jobsite/jobs/60348382?lang=en">https://www.kuleuven.be/personeel/jobsite/jobs/60348382?lang=en</a>
<b>Apply Online Here</b>	<a href="https://webwsp.aps.kuleuven.be/esap/public/ui5_ui5/sap/zh_erc_esol_go/index.html?sap-ui-language=EN&amp;vacaturenummer=60348382&amp;toepassing=HVY">https://webwsp.aps.kuleuven.be/esap/public/ui5_ui5/sap/zh_erc_esol_go/index.html?sap-ui-language=EN&amp;vacaturenummer=60348382&amp;toepassing=HVY</a>
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### **Job Description**

#### **Professor in Mechanical Engineering: Vibration and Acoustic Control in Automotive Engineering**

KU Leuven is seeking a full-time professor in the area of Mechanical Engineering and is looking for internationally orientated candidates with an excellent interdisciplinary research record within the field of automotive engineering, with specific focus on vibration and acoustic analysis and control of mechatronic systems, including vehicle and drivetrain dynamics. In addition to a strong research record, the candidate possesses excellent teaching competences relevant to engineering education. The successful candidate will be appointed in the Department of Mechanical Engineering and the Faculty of Engineering Technology of the Science, Engineering and Technology Group at KU Leuven. The research linked to this vacancy will be located at the De Nayer Campus, where it will be integrated in a broader cross-disciplinary research group on green and smart mobility, encompassing other engineering disciplines in automotive technology supporting future mobility, including vehicle mechanics and design, manufacturing, materials and electronics engineering. Topic-wise, the research activities will also be embedded in the activities of the Mecha(tro)nic System Dynamics (LMSD) research division.

The LMSD division aims to create added value during each phase of the life cycle of mechanical and mechatronic systems (design, validation, production, operational phase) by understanding, designing, monitoring and controlling their dynamic (noise, vibration, motion) behaviour. It thereby builds upon solid research infrastructure, an extensive network (national as well as international), and connections with companies and non-profit organisations in Belgium and abroad. The research group and the department are involved in a large number of regional, national and international research projects and are strongly linked to the technology transfer services of the university. This is done in cooperation with Flemish as well as European and worldwide research institutes for technology transfer.

### **Research**

- You will be responsible for developing and leading a cutting-edge research program in the field of vibration and acoustic control of mechatronic systems, with a specific focus on automotive applications. Your research will focus on the analysis, design, realisation as well as experimental validation of these systems, considering both passive and active control approaches. You will address common functional and non-functional challenges in the complete frequency range, with a focus on improving the design of hardware as well as software components and developing smarter ways to couple and control multiple interacting components. In this research, you will

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utilize both experimental and numerical techniques, exploiting the infrastructure and resources available at the De Nayer Campus as well as the LMSD division. Your research will be application-oriented towards automotive industry, alongside the more general machine industry. You will balance the needs of industry with the scientific state-of-the-art in this field. You will be expected to work with an international mindset, collaborating with researchers and partners around the globe to advance the field of vibrational and acoustic control in automotive engineering.

- As an expert in your field, you will strengthen existing research lines both at the De Nayer Campus and within the Mecha(tro)nic System Dynamics (LMSD) research division of the Department of Mechanical Engineering. You work in close collaboration with and as a core member of both entities, and strive for maximum complementarity within both environments when developing your research programme.
- You engage in targeted scientific research, resulting in PhDs and publications that meet international standards and lead to broad international recognition.
- You support or initiate a network of companies through the valorisation of research results and by delivering industrial services, aimed at strengthening industrial innovation.
- As part of your research programme, you develop international partnerships, within the academic world as well as with industrial partners.
- You are able to acquire competitive funding, both project-based government funding as well as industrial funding.
- You strive for excellence and thus contribute to the continued development of the LMSD division, the department and the faculty.
- You devote attention to the valorisation tracks and technology transfer and application of the results of your research in industry, government, and society.

### Teaching

- You provide high-quality education for both bachelor and master students in the field of mechanical engineering, dynamics, (electrical) drivetrains and mechatronics, with a clear commitment to the quality of the programme as a whole. You engage students in courses given to freshman years as well as in advanced years.
- 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.
- You develop your teaching in accordance with KU Leuven's views on activating and researched-based education and make use of the possibilities for educational professionalisation offered by the faculty and the university.

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### Service

- You are prepared to provide scientific, social and internal services.
- You are willing to perform applied research projects in collaboration with industry and government and to establish a network of industrial partners.
- You are actively involved in promoting the Faculty of Engineering Technology to future students and participate in information and public relations activities of the faculty.

### Profile

You have a PhD in Mechanical Engineering, or a similarly qualified degree, and have experience in a research field related to dynamics and acoustics in automotive engineering.

- You have the ambition to contribute to the valorisation of research in industry and society.
- Industrial experience or an extended network in the relevant industrial sector is an important advantage. A strong record with collaborations with industry is a plus.
- You have a strong (applied) research profile. The quality of your research is evidenced by publications in leading international journals, books and proceedings of international conferences. Successful project applications and valorisation in cooperation with industry is a benefit. International experience is an important advantage.
- You have demonstrable qualities related to academic education. Teaching experience is an advantage.
- You possess organisational skills and have a cooperative attitude. You also possess leadership capacities within a university context.
- Proficiency in English is required. The official language used 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 meetings. Before teaching courses in Dutch or English, you will be given the opportunity to learn Dutch, respectively English, to the required standard.

### Offer

- We offer a full-time employment as professor in an intellectually challenging environment.
- KU Leuven is a research-intensive, internationally oriented university that carries out both fundamental and applied scientific research. Our university 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

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students with an academic education that is based on high-quality scientific research. Recently, KU Leuven has been selected as one of the 10 most innovative universities in the world.

- To facilitate scientific onboarding and accelerate research in the first phase, a research position will be made available equivalent to a PhD scholarship for 4 years. If you have no other substantial funding available to you, you can apply for a start-up grant of EUR 100.000, on the condition that you are appointed for at least 50%.
- You will work and teach at the KU Leuven De Nayer Campus (close to Mechelen) and (for teaching) Group T Campus (Leuven), two young and dynamic environments with a 45 minutes connection by car or train. Both are also close to Brussels (20 minutes by train), capital of the European Union, and about two hours to Paris, London and Amsterdam.
- Depending on your record and qualifications, you will be appointed to or tenured in one of the grades of the senior academic staff: assistant professor, associate professor, professor or full professor. In principle, junior researchers are appointed as assistant professor on the tenure track for a period of 5 years. At the end of this period and a positive evaluation, they are permanently appointed (or tenured) as associate professor.
- 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, ...

### Interested?

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

- Prof. Dr. Ir. David Moens, chair of the Department of Mechanical Engineering (david.moens@kuleuven.be, tel. +32 16 37 28 79) or
- Prof. Dr. Ir. Wim De Roeck, LMSD@GroepT (wim.deroeck@kuleuven.be, tel. +32 16 37 28 82)

You can apply for this job no later than February 25, 2025 via the [online application tool](#) If you have problems submitting your application online, please send an email to [solliciteren@kuleuven.be](mailto: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 realisations;
- an extensive cv including a full publication list;

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- 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 organisation (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 places great importance on research integrity and ethical conduct and will therefore ask you to sign an integrity statement upon appointment.

### **EEO/AA Policy**

KU Leuven strives for an inclusive, respectful and socially safe environment. We embrace diversity among individuals and groups as an asset. Open dialogue and differences in perspective are essential for an ambitious research and educational environment. In our commitment to equal opportunity, we recognize the consequences of historical inequalities. We do not accept any form of discrimination based on, but not limited to, gender identity and expression, sexual orientation, age, ethnic or national background, skin colour, religious and philosophical diversity, neurodivergence, employment disability, health, or socioeconomic status. For questions about accessibility or support offered, we are happy to assist you at [hr.diversiteit@kuleuven.be](mailto:hr.diversiteit@kuleuven.be)

### **Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

**Contact** Professor David Moens, Chair of the Department of  
Mechanical Engineering

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