Junior Professor in thermo-hydraulics for lead cooled Small Modular Reactors
KU Leuven & UC Louvain

Job Title Junior Professor in thermo-hydraulics for lead cooled Small Modular Reactors

Department Department of Mechanical Engineering
https://www.mech.kuleuven.be/en

Institution KU Leuven & UC Louvain
Leuven / Heverlee, , Belgium

Date Posted Oct. 7, 2024

Application Deadline Oct. 28, 2024

Position Start Date Jan. 1, 2025

Job Categories Assistant Professor
Associate Professor
Professor

Academic Field(s) Nuclear
Mechanical Engineering

Job Website https://otarchp.aps.kuleuven.be/archive?get&pVersion=0045&contRep=P1&docId=3BCBB89EA

Apply Online Here https://jobs.uclouvain.be/PersonnelAcademique/job/An-academic-in-nuclear-thermal-hydraulics-

Apply By Email

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Job Description

The research will be carried out both at KU Leuven (Faculty of Engineering Science, Department of Mechanical Engineering, Division of Applied Mechanics and Energy Conversion) and at UCLouvain (Ecole Polytechnique and Institute of mechanics, materials and civil engineering) in close collaboration with SCK CEN. We are looking for internationally oriented candidates with an excellent research record and with teaching competence in the field of Mechanical Engineering, including nuclear technology. The successful candidate will be appointed for a fixed term, 50% in the Department of Mechanical Engineering and Faculty of Engineering Science at KU Leuven (Leuven) and 50% in Institute of mechanics, materials and civil engineering, Ecole polytechnique de Louvain at UCLouvain (Louvain-la-Neuve).

You will find below the link to the offer at UCLouvain.
https://www.sckcen.be/en/expertises/nuclear-systems/small-modular-reactor-smr

SCK CEN is a world leader in the field of nuclear technology for peaceful applications. Together with SCK CEN, the federal government has launched a research programme exploring the possibilities of electricity and hydrogen production via SMR by 2040. The aim is to develop lead-cooled SMRs and prepare the path to a lead-cooled technology demonstrator at SCK CEN in Mol.

Duties

Research

- You are expected to set up a research programme that will strengthen the research portfolio of the two research groups at KU Leuven and UCLouvain. Focus of your research is on thermo-hydraulics to support the development of lead cooled SMRs, including the opportunities that might be offered by the use of additive manufacturing for an improved design concept. Research topics can include integrated thermo-hydraulic design of SMR systems, e.g. to ensure passive safety, optimal heat exchanger design, etc. The research is executed in close cooperation with the SMR research and development team at SCK CEN with the aim of intensifying the research on nuclear fission in Belgium.
- You are capable to mobilize expertise from other research teams within both KU Leuven and UCLouvain in order to ensure the intensification of the academic research on nuclear fission.
- You will strive for excellence in your research, create scholarly output that stands up to comparison with the highest international standards and, through project applications, secure

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external funding.
- You supervise PhD researchers and take responsibility for their academic and professional development.

Teaching

- You will ensure high-quality education in the study programmes of the Faculties of Engineering at both universities, more specifically in course units that tie in with your research such as for courses in the interuniversity Master of nuclear engineering, see https://www.kuleuven.be/programmes/master-nuclear-engineering
- You develop your teaching in accordance with KU Leuven's and UCLouvain's vision of activating and research-based education and make use of the opportunities for educational professionalization offered by both faculties and universities.

Service

- You are willing to provide scientific, social, industrial and internal services. Given the focus of this position on research and
teaching, a strong involvement in service is not expected.

Profile

- You have a PhD in Engineering Science or a related field, and have expertise in the field of nuclear technology.
- You have a strong research profile. The quality of your research is proven by publications in prominent international journals and patents. International experience is an 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.
- A good command of English is required. KU Leuven offers courses in academic English.
- The administrative language of KU Leuven is Dutch. If you have no or insufficient knowledge of Dutch upon recruitment, KU Leuven
provides a training offer that should allow you to participate in board meetings. Before teaching a class assignment in Dutch, you will be given the opportunity to acquire the knowledge of Dutch required for this purpose.
- You communicate also in French. If this is not the case, you commit to acquire proficiency in this

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language within two years of taking up your post.

Offer

- We offer a full-time appointment as assistant professor for a fixed term, starting at earliest on January 1, 2025 until September 30th, 2028 (50% at KU Leuven and 50% at UCLouvain) in an intellectually challenging environment. Extension of the appointment depends on your performance as well as on further financial support from the government.
- KU Leuven, UCLouvain and SCK CEN are research-intensive, internationally oriented centres conducting both fundamental
  and applied scientific research. The three institutions have a strong inter- and multidisciplinary focus and strive for international excellence. To this end, KU Leuven, UCLouvain, and SCK CEN actively cooperate with their research partners at home and
  abroad. KU Leuven and UCLouvain offer their students an academic education based on high-level scientific research. The SCK
  CEN Academy organizes a unique international training in reactor technology.
- Your appointment implies to work 50% of the time in Leuven and 50% of the time in Louvain-la-Neuve and maintain regular contact with SCK CEN.

More information
To apply for both (KU Leuven + UC Louvain) posts, submit your application at October 28th, 2024 at the latest only to UCLouvain, via the online recruitment platform “Success Factors” and do not use the button "Apply for this position" on the KU Leuven website.

Interested?
For more information please contact:
• Prof. dr. ir. Martine Baelmans, tel.: +32 16 32 25 17, mail: tine.baelmans@kuleuven.be
• Prof. dr. ir. Hervé Jeanmart, tel.: +32 10 47 22 09, mail: herve.jeanmart@uclouvain.be

Add to your application following documents:
- Motivation letter
- 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);
- CV + full publication list and summary of 3-5 most significant recent publications;
- Research strategy: your four-year research plan and a PhD thesis proposal for hiring a PhD student;
- Your vision on academic education and its organization (maximum 2 pages);
- Copy of PhD diploma;

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- Names and contact details of 3-5 persons who can recommend your application.

The acknowledgement of receipt of your application will tell you how to submit your letters of recommendation.

EEO/AA Policy

KU Leuven and UCLouvain places great importance on research integrity and ethical conduct and will therefore ask you to sign an integrity statement upon appointment.

KU Leuven and UCLouvain are 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.

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 this email address: diversiteit.HR@kuleuven.be

Contact Information

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

Contact Prof. Dr. Ir. Martine Baelmans
Department of Mechanical Engineering
KU Leuven
Leuven / Heverlee
Belgium

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Contact E-mail tine.baelmans@kuleuven.be