PhD vacancy on non-invasive quantification of residual stress and quantification of fatigue strength of hybrid manufactured components High-Precision Hybrid Laser-based Additive & Subtractive Manufacturing (Hi-PAS)

Where


Duration

A full-time job position for 4 years.

Job content

The PhD researcher will contribute in a large research project Hi-PAS ‘High-Precision Hybrid Laser-based Additive & Subtractive Manufacturing’ that is funded by the Flemish funding organization FWO (Research Foundation - Flanders). This project addresses the capabilities of a beyond state-of-the-art hybrid laser-based additive and subtractive manufacturing.

The department of Mechanical Engineering (AVRG research group), VUB (Prof. Dr. Ir. P. Guillaume) is the project coordinator. Other research partners are the department Chemical and Materials Engineering (SURF research group), VUB (Prof. Dr. Ir. Herman Terryn, Prof. Dr. Ir. Iris De Graeve), and our Department of Mechanics of Materials and Constructions (MeMC) (Prof. Dr. Ir. L. Pyl and Prof. D. Van Hemelrijck).

The project has two academic partners KULeuven and University of Antwerp and an industrial advisory board.

Our VUB-MeMC research group will focus on aspects of quantification of distortions in-situ, non-invasive quantification of residual stress and quantification of fatigue strength. The candidate should have a strong background in materials (mechanics, numerical and experimental characterization).
Research Environment

The Mechanics of Materials and Constructions Department consists of 4 full-time professors and 0.5 part-time professors, 2 postdoctoral researchers and 20 PhD students. The successful candidate can benefit from strong collaborative links with other universities (KU Leuven, UA...). Besides, 15 PhD students have successfully obtained their PhD degree in the last five years. The PhD student will also be assisted by a postdoctoral research fellow.

IF...

You hold a Master degree in Mechanical Engineering, Civil Engineering, Material science, (Applied) Physics or a related field and want to contribute to innovations in additive manufacturing. A solid background in mechanics of materials is strongly recommended. Former experience with (non-destructive) experimental material characterization is an advantage. Experience with finite element simulations is a bonus. You are interested to interact and collaborate closely with academic and industrial partners during the PhD study. You are a team-player and can work in an international environment using English as a scientific communication tool. You will be encouraged to publish in peer-reviewed international journals.

Timing

The PhD vacancy is a full-time job position for 4 years, starting with a maximum of 1 year as trial period. Candidates should be highly motivated and have a Master degree.

Application procedure

Your application should contain:
- A motivation letter with a concise statement of the reason for applying including an explanation why you want to do research
- A curriculum vitae in Dutch or English
- The title and abstract of your master thesis
- A transcript of records (Bachelor and Master degrees), course titles, number of credits and marks
- A copy of diplomas
- A proof of proficiency in English (TOEFL or IETLS certificate) for non-Dutch speaking applicants
- Contact details (name, affiliation, phone number and e-mail address) of two persons who can provide a reference on our request

You send the C.V. by post or e-mail to the following person:

LICY PYL, PROF. DR. IR.
Vrije Universiteit Brussel, Faculty of Engineering Sciences
Dept. Mechanics of Materials and Constructions (MeMC)
Pleinlaan 2 | 1050 Elsene
Lincy.Pyl@vub.be