



PhD Vacancy

Experimental & Translational Vascular Biomechanics

Biomedical Engineering Dept. / Erasmus Medical Center (the Netherlands)

(Post date: 23/10/2023)

The Cardiovascular Biomechanics Laboratory of the Biomedical Engineering Department at Erasmus Medical Center (Rotterdam, the Netherlands) has a fully-funded PhD position in the field of Experimental and Translational Biomechanics of atherosclerotic arterial disease.

Project description

The rupture of diseased segments (atherosclerotic plaques) in arteries is a major cause of fatal and disabling cardiovascular events. Plaque rupture is a mechanical event where the collagenous plaque tissue loses its structural integrity. Quantitative assessment of the plaque tissue's structural organization and mechanical characterization of the plaque tissue both ex-vivo and in-vivo are essential to obtain the necessary information not only to understand the fatal plaque rupture event but also to develop life-saving predictive models for plaque rupture risk. To be the front-runner in the field of atherosclerotic plaque biomechanics, the recruited PhD candidate will perform mechanical and structural assessment ex-vivo (on excised tissues) and in-vivo (in patients) of fibrous plaque tissue.

Candidate profile

We are looking for a highly motivated candidate to conduct multidisciplinary doctoral research on the computational modeling of atherosclerotic arteries for rupture risk assessment. The potential candidates are expected to:

- Have a strong interest and/or experience in ex-vivo (cardiovascular) tissue experimentation, in-vivo data collection, and continuum mechanics,
- Hold or are about to obtain an MSc degree from a technical program such as technical medicine, (bio)medical engineering, biomedical sciences, or similar,
- Be creative, a team player, and eager to take initiative,
- Have good communication skills, and be fluent in both written and spoken English.

Cardiovascular Biomechanics Group at Erasmus Medical Center

Cardiovascular Biomechanics Group at Erasmus MC consists of engineers, biologists and clinicians, strongly driven by the scientific motivation of performing innovative, cutting-edge cardiovascular research. The Lab combines fundamental, translational, experimental, computational, and clinical studies in the cardiovascular field, and closely collaborates with the other research groups at the Biomedical Engineering Department, the clinical departments of Erasmus MC, and the Biomechanical Engineering Dept. of Delft University of Technology.

Conditions of employment

We offer a 4-year full-time (36 hours/week) position in an inspiring multidisciplinary and international environment. The gross monthly salary will be based on your level of relevant experience, in accordance with the Collective Labor Agreement for Dutch University Medical Centers (CAO UMC). Additionally, Erasmus Medical Center provides excellent facilities for professional and personal development, a holiday allowance and an end-of-year bonus, and a number of additional benefits.

More information

For further information about the project and the position, you can contact Dr. Ali Akyildiz (a.akyildiz@erasmusmc.nl / a.c.akyildiz@tudelft.nl / www.aliakyildiz.net).

How to apply

Interested candidates should send 1.) their up-to-date CV with a list of (academic and/or industry) references that we can contact, 2.) a cover letter that details your motivation and fit to the job requirements (max 2 pages), and 3.) a list of grades of the qualifying degrees (BSc, MSc) to Dr. Ali Akyildiz (a.akyildiz@erasmusmc.nl / a.c.akyildiz@tudelft.nl). Screening of applications will start as soon as applications are received and will continue until the position is filled.