

Job Opening

Title: Senior R&D Engineer - Biomechanics

Reports to: R&D Manager/ Director

About CardiacBooster:

CardiacBooster is a medical device company developing a new and innovative device to support the heart. Heart support devices are used by interventional cardiologists to stabilize patients in times of acute heart failure (cardiogenic shock) or patients undergoing high-risk coronary procedures (high-risk PCI). Our objective is to overcome the limitations of current assist devices by providing interventional cardiologists with a more effective and less invasive device.

CardiacBooster was founded in 2018 as a Radboud UMC spin-off. We are an enthusiastic team with diverse backgrounds and expertise located in Nijmegen, the Netherlands and in Galway, Ireland. CardiacBooster is an equal opportunity employer.

Job Description:

The Senior R&D Engineer - Biomechanics will be part of the team responsible for the development of CardiacBooster's pVAD device. The Senior R&D Engineer - Biomechanics will work closely with physicians, subject matter experts, researchers, and colleagues. As Senior R&D Engineer - Biomechanics, you will share the responsibility of realizing the full potential of CardiacBooster's technology. The successful candidate will have entrepreneurial spirit, the required persistence to succeed in a start-up organisation, and the ability to work in a highly dynamic environment.

Your key responsibility will be to research the impact of device design on anatomy and physiology by analysing the output from in vitro and in vivo models. You will create numerical or physical engineering models that mimic these device behaviours so that design alternatives can be developed and tested. The Senior R&D Engineer - Biomechanics will work from the company's office in Galway and be able to travel occasionally.

Essential Job Responsibilities:

- Produce numerical and bench-top models for device testing, that represent in-vitro or in-vivo conditions.
- Network with universities, interact with customers and cooperate with SMEs to develop model requirements.
- Specify, source, build and commission test apparatus.
- Conduct testing on devices and present updates and summaries of test data using statistical techniques where necessary.
- Document test method procedures and keep updated in line with changes to standards or evolving state of the art.
- Develop, design, document and perform test method validations.

Required Qualifications & Characteristics:

- Must have at least 5 years industry experience in medical device development.
- Must hold a recognised primary degree or masters in relevant engineering or scientific disciplines (e.g. Biomechanical or biomedical engineering, biomedical science, applied physics, mechanical engineering).
- Knowledge of the potential impact medical devices have on anatomy and physiology while in use (e.g. bio-tribology) and how to model it.

- Willingness to travel on occasion (e.g. to Nijmegen, Netherlands site).
- Experience with physical measurement equipment, sensors and simulated use testing of catheter-based, electro-pneumatic medical devices.
- Experience using 3D CAD modelling software (e.g. Solidworks).
- Programming skills in Matlab & Simulink.
- Good communication skills and ability to tailor those communications depending on the audience.
- Competent in applying statistical techniques to interrogate test data and draw conclusions. Experience developing and executing DOE.
- Experience working to regulatory requirements of 21CFR820, MDR and ISO13485.
- Experience in verification and validation of medical devices in particular for percutaneous cardiovascular interventions (structural heart experience an advantage).
- Competent technical writer.
- Experience developing and executing Gauge R&R studies.

Applications:

- Please submit your application, including resume, to hr@cardiacbooster.com

The above statements are intended to describe the general nature and level of work being performed by people assigned to this classification. They are not intended to be construed as an exhaustive list of all responsibilities, duties, and skills required of personnel so classified.