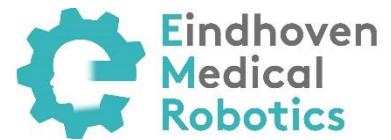


Join our Team!



Robotics and Control Engineer



About the job

Eindhoven Medical Robotics develops high-precision autonomous surgical robots. A surgeon will use an application to define an accurate pre-operative plan to perform autonomous surgery. The plan will then be transformed into a trajectory for the robot. The robot can then autonomously (under supervision) perform the surgery according to the planned trajectory.

As a robotics and control engineer, you will help develop medical software that is easy to use, has good performance, and has high accuracy. The core job will be focused on developing robot kinematics, dynamics, and control along with experimental tasks related to robot motion planning. You will perform your tasks as part of a multi-disciplinary team that consists of mechanical, electrical and software engineers that collaborate closely with our clinical partners. Besides your software responsibilities, you are expected to become proficient in writing documentation and working according to industry standards such as ISO13485, IEC62304 and IEC82304, to bring medical devices to market.

Projects to work on

The project encompasses the complete robot software from calculating robot kinematics, dynamics, workspace, motion planning and implementing on the robotic system. The focus on this job application lies on:

- Design, implement and validate robot control strategies for high performance and accuracy.
- Test the software in a clinical environment to verify results.

Responsibilities

- Be an active member of a multi-disciplinary team.
- Specify requirements for robot software modules and products.
- Perform experiments on the robotic system to validate software.
- Analyze, validate and verify experiment results.
- Develop control software, including writing automated tests and performing code reviews.
- Define and perform manual tests and / or user tests of our product.
- Write technical and process documentation.
- Delivery of code according to the company standards, principles and adhering to the desired quality.
- Focus on improving the code by listening to feedback and giving feedback to other team members.

Education, Experience

- Perform robot calculations and simulation related to forward-inverse kinematics, trajectory generation and motion planning.
- To be able to simulate and experimentally validate robot workspace.

- Modelling robot dynamics preferably using Matlab-Simulink.
- Understanding robot calibration is a plus.
- Experience in using real time controller implementation platforms such as Simulink link real time, Speedgoat, NI, etc.
- Experience in mechatronic system identification using frequency domain techniques.
- Experience in performing frequency response measurements for robotic systems is a plus.
- Feedback controller design, tuning and performance analysis using frequency domain techniques such as loop shaping etc.
- Real-time controller implementation is a plus.
- Feedforward controller design and tuning using higher order trajectories.

Languages

- English.
- Dutch is a plus.

Location

Eindhoven, The Netherlands. We are located close to Eindhoven Central Station.

Our offer

We offer a full-time job in an informal and stimulating work environment with innovative products and high societal relevance. An attractive market-conform remuneration package with excellent benefits will be offered.

Contact

Email: recruitment@emrobotics.com

Or go to: www.emrobotics.com/career/

