Internship / Graduation project

Armour Design using Machine Learning

The company - DeRegt

DeRegt is a high-tech cable manufacturer company, producing specialized cables for dynamic subsea applications. We operate in the seismic, ROV, renewable energy, aerostat and defence markets. Our office as well as manufacturing plant is located in the Netherlands in Krimpen aan de Lek, near Rotterdam.

Project description

Dynamic cables – cables continuously subjected to mechanical loading - consists of a variety of layers where components are laid up in helices. To calculate for mechanical as well as electrical properties DeRegt has established their own design software over the years.

This project focuses on the optimization of the design process of the armour layers – these are crucial for providing strength and dynamic behavior. Your task is to implement optimization methods - i.e. machine learning - to enhance these calculations and develop a more efficient design process.

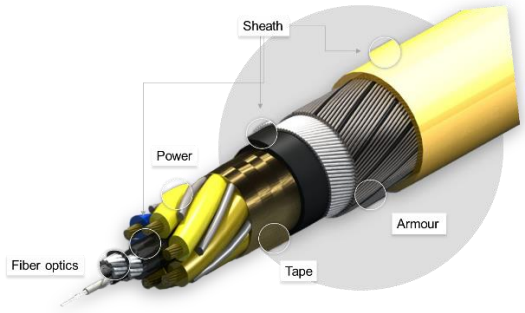

Figure 1: Typical cable layout.

Figure 2: Preform head of an armouring machine.

Your profile

- Master student in Applied Mathematics or related field.
- Affinity with software as well as practical engineering disciplines.
- Ability to work autonomously, set project targets and ability to be a pioneer.

Our offer

- A challenging topic in which you are free to find your own way.
- Flexible work hours and ability to work partially from home.
- Possibility to make a great and tangible difference in our company.
- Monthly internship allowance of €550,- (MSc internship) or €650,- (MSc graduation).

If you are interested or have any questions please contact Evert van Veldhuizen (R&D Manager at DeRegt), e.vanveldhuizen@deregtcables.com.