Stage weken voor de opleiding Master Informatica

Titel: Optical component characterization

Gegevens bedrijf:

Naam: Barco
Tel:
Contactpersoon: Stages
mailadres: stages@barco.com
Adres waar de student zal werken:

Korte of lange stage: **4 weken / 6 weken**

Korte beschrijving van de opdracht:

Barco offers a broad product range of **high-end projectors**. In these products, Barco uses a wide variety of optical components, ranging from projections lenses which allow projecting an image formed on the **spatial light modulating device (typically a DMD)** to a projection screen, to optical components integrated into the projector's internal structure, such as diffusers, lenses, dichroic filters and mirrors. All the properties of each individual element have to be carefully considered, in order to come to best possible design. Every single element can potentially affect a projector's specifications, including its cost, physical appearance and performance.
Therefore, properly characterizing optical elements in order to obtain a detailed performance assessment of the optical components plays a key role in the optical design of projectors. Although Barco has many tools and setups available to do proper analyses of such components, there are still possible improvements/expansions to be made.

Your project

- The goal of this work will be **to create and optimize suitable setups for the characterization of optical components**. This is a multidisciplinary challenge; as such setups require a well-considered mechanical configuration, as well as the proper definition of the measurements to be performed using the best suited devices, and dedicated processing of the acquired data.
- Simulation software can be used as a tool for these setups: CAD programs can be used to create mechanical drawings and optical simulation software can help to define the proper tests, and to interpret & validate the obtained results.

Technologieën die aan bod zullen komen:

As this topic is multidisciplinary, we look for several people with several possible profiles:

- You are a student photonics or applied physics.
- You are a student industrial science: electromechanical engineering, electrical engineering, mechanical engineering.
- As you will be working together multidisciplinary, you are a strong team player & communicator.
- You are fluent in English