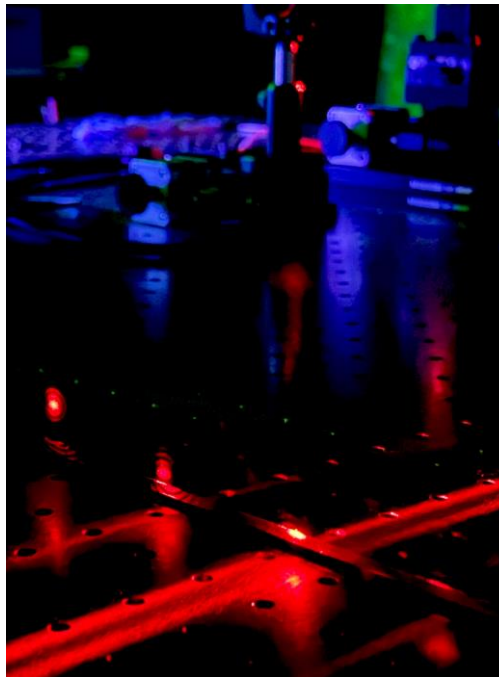


Analysis and development of Lambertian Equivalent Retro Reflectors

Project Type: Master Project



Duration: 6 months

Location: Institut für
Produktentwicklung und Gerätebau
(Gebäude 8143)

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SCRAMBLUX is a German Startup company. We want to deliver key technology for Advanced Driver Assistance System (ADAS) and Autonomous Driving markets.

Our patented solutions allows for testing of LiDARs in a new type of instrument, which saves the customer a lot of costs.

LiDAR is one of the most important sensors for automated driving. A LiDAR is a laser sensor, which can produce a 3D (point cloud) image of whatever is in front of it. This is very important for AI and Automated Driving. It allows AI to make better and faster decision than only with a Camera or a Radar.

To advance our technology and deliver excellent solutions to our customers, we are looking for ambitious Master students, to participate in our product development.

Project Description

Participate in advancing LiDAR testing technology with a focus on retro reflectors in the SCRAMBLUX Instrument (SX-I). This project involves conducting an overview of existing literature and market solutions for retro reflectors and physically modeling retro reflectors. Based on the retro reflector model, you will design a mathematical approach to calculate Lambertian Equivalent retro reflectors (LERR). You will build and own a reflectivity setup in the lab, conduct experiments, and test to achieve target reflectivity of 10%, 15%, and 85% Lambertian reflection at 35 m in the SX-I.

Skill Requirements

You should have excellent knowledge of optical modelling and feel comfortable conducting experiments in a lab.. You should have experience in lab work and literature work.

The project will be conducted at IPeG in Garbsen and jointly supervised with an IPeG employee.