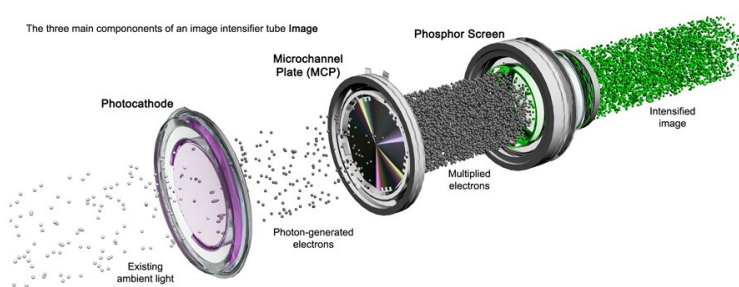


Photonis Netherlands B.V. is looking for a MSc student with a strong physics background, affinity with characterisation work, optics, semiconductor physics, or material science.

## INTERNSHIP

# SINGLE PHOTON COUNTING & IMAGING DETECTORS

Single photon counting and imaging detectors are used to measure and visualize extremely weak light signals, down to single photons and in many cases it is combined with high temporal resolution. The detectors are used in a range of applications, such as High end LIDAR, Quantum optics and Quantum telecommunication, High energy physics, Fluorescence imaging, Astronomy and others. To detect single photons, Photonis proposes various types of high-sensitivity, fast-timing, low-noise, vacuum tube based single photon detectors.



When it is required to measure spatial position of arriving single photons the detectors, based on Image Intensifier Tubes (IIT), are widely used. IIT is a vacuum device consisting of a photocathode, Microchannel Plate (serving as an electron multiplier) and phosphor anode. A single photon arriving on the photocathode produces an intensive "blob" on the anode which can be detected by digital sensors at the back of the detector.

The topic of the student project is to measure blobs distribution (intensity, position, size) for different settings of IIT and digital sensors. One of the important tasks will be to implement/ develop different software algorithms to measure on-line the resulting blob parameters. Short report including the experimental part, discussion and summary with optimal blob detection algorithms, settings for IIT and cameras to be drawn.

### Our ideal candidate:

- Master's student with a strong physics background
- Understanding of single photon counting and imaging detectors
- Affinity with modelling software, programming and experimental work
- Teamplayer
- Proficiency in written and spoken English is essential, while knowledge of Dutch is advantageous.

### What we're offering:

- Internship of 4-9 months, start date any time
- Location Photonis Roden
- A monthly compensation of € 650,-

### Application Process:

Interested candidates should submit their CV and cover letter to HRM at PHOTONIS: [hrm@exosens.com](mailto:hrm@exosens.com).

Photonis Netherlands B.V. is a key player within the Exosens group and stands as the European leader in cutting-edge electro-optical technologies catering to defense and industrial applications.

Join Photonis and contribute to ground-breaking research in a stimulating and innovative environment!

*By applying for this position, you agree that we will provide your personal data to our internal stakeholders. We may consult your LinkedIn account. A Certificate of Good Conduct (VOG) will be requested upon employment.*